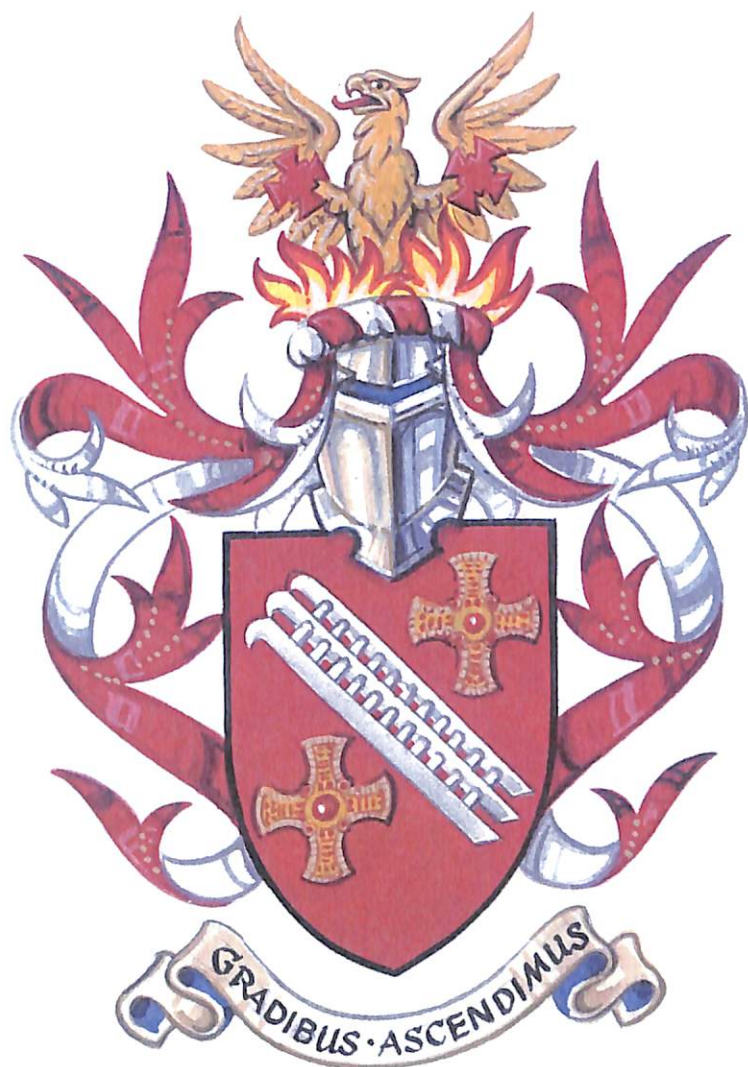


Grey College University of Durham

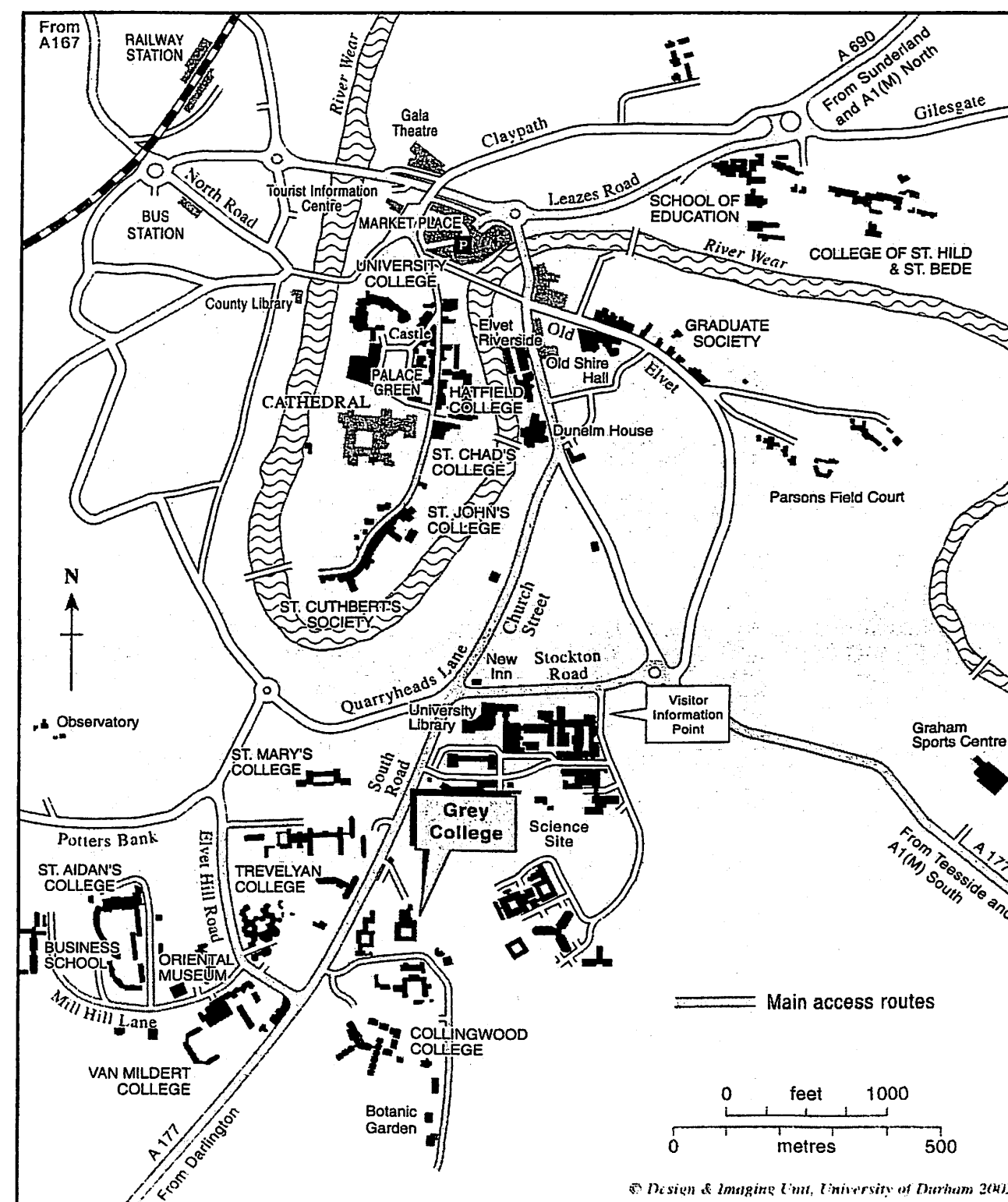


Freshers' Handbook

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How to get to Grey College



How to get to Grey College:

By Car

From the South

Drive north on the A1 (M) and exit at Junction 61. Take the A177 signposted for Bowburn. Follow the road for approximately three miles until you reach a roundabout, turn left onto Stockton Road. Turn left at the traffic lights ahead onto South Road, then continue until you see the signpost for Grey College, second turn on the left.

From the North

Drive south on the A1 (M) and exit at Junction 62, A690 signposted for Durham and Consett.

You will travel down a dual carriageway for 1.5 miles. At the roundabout, go straight ahead towards the city centre. Stay in the left hand lane and just before the next roundabout take the filter lane. The Marriott Royal County Hotel is on your left. Go straight ahead at the traffic lights. Move into the right hand lane and filter slightly right up the hill. You will come to a crossroads with traffic lights. The New Inn is on your left. Drive straight ahead at the traffic lights and Grey College is the second turn on your left.

By Rail

Fourteen trains per day travel from London and Edinburgh to Durham.

The journey takes less than three hours from London, one and a half hours from Edinburgh and forty-five minutes for York.

By Bus

There are several express coach services daily from most major cities.

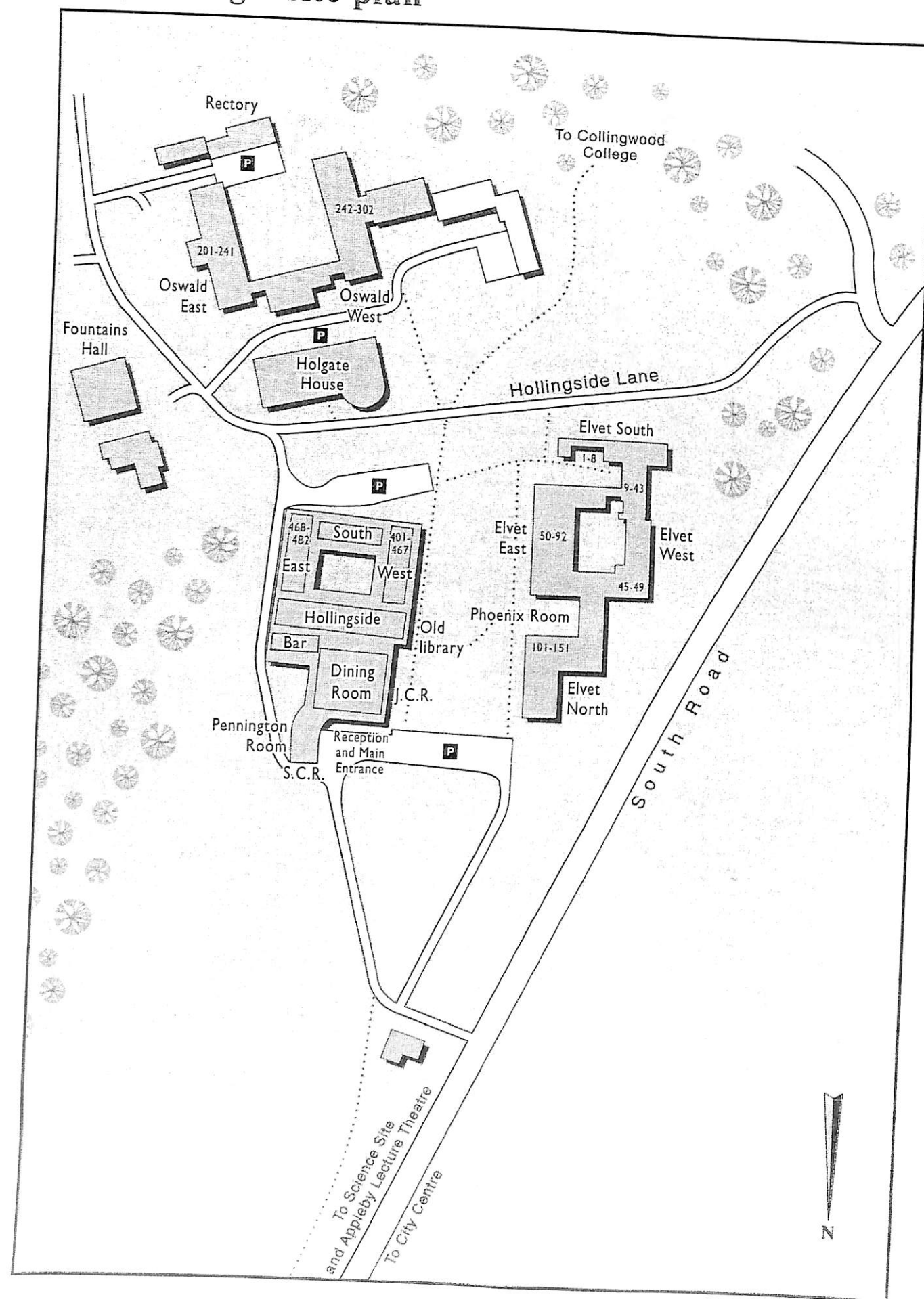
By Air

The nearest airports are Newcastle upon Tyne and Teesside. Newcastle airport is linked to Durham by rail and Metro.

By Sea

European scheduled ferry services travel to and from Newcastle on a regular basis.

Grey College: site plan



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Grey College
Durham
DH1 3LE

Tel: 0191 334 5639

E-mail: k.l.stephenson@durham.ac.uk

INFORMATION FOR FRESHERS

WELCOME TO GREY COLLEGE!!

Grey College offers a warm welcome to all first year (fresher) undergraduate students. Congratulations on satisfying the demanding admissions criteria for your course. We are pleased to offer you a place at Grey and very much look forward to meeting you at the start of your degree in October 04. The remainder of this booklet is designed to provide you with essential information to ensure you quickly and successfully settle into life as a Durham Student.

ARRIVAL

Freshers are expected to be in residence by 5.00 pm on Saturday 2nd October. If for any reason this is impossible, please inform the Admissions Secretary in advance, giving the reason and the time when you expect to arrive. Anyone who wishes to come into residence before this date may do so after obtaining permission from the Admissions Secretary. Such residence will be charged at the Junior Common Room (JCR) members' rate.

Undergraduate members of the College will be on-hand to assist you on arrival and to help you move into College; it will assist those organising this service if you will complete the Arrival form at the back of this booklet.

RECEPTION ON ARRIVAL

Tea and coffee will be served all day in the Bar on the Saturday of arrival. Students are warmly invited to bring any family or friends accompanying them to this function. The Master, Vice-Master and Bursar will be present.

Students whose family or friends bring them to College may invite them as guests to lunch on the day of arrival. The Admissions Secretary **must** receive the Arrival Form by the **15 September 2004** indicating the number of diners and these will be charged on the student's Battels Invoice at the JCR guest rate.

INFORMATION REQUIRED

Please complete and return the following forms which can be found at the back of this booklet (excluding the College Record form which is in your pack separately):-

- a) Occupancy Agreement
- b) Student College Record
- c) Next of Kin Form
- d) Room Sharing Form
- e) Arrival Form
- f) Tuition Fee Undertaking Form
- g) Photographs

We have been asked by the Department(s) and other organisations within the University to supply passport photographs of you; will you please supply 8 photographs by **Wednesday 15 September**, also please **PRINT your name on the back of each photograph**. (Without these photographs it will not be possible to issue you with cards entitling you to the use of University facilities.)

- h) Medical Questionnaire

The completed Medical Questionnaire should be returned directly to the University Health Centre in the envelope provided. **All other documents must be returned to the Admissions Secretary, at the address above by 15th September 2004.**

- i) Bed Linen Form

The College provides Linen for International/Overseas students. It will be assumed that anyone not returning the form by **15 SEPTEMBER 2004** wishes to use College Duvets and Linen for the **ENTIRE ACADEMIC YEAR AND YOU WILL BE CHARGED £66.00**

DIARY OF FRESHERS' WEEK ARRANGEMENTS

SATURDAY 2 OCTOBER 2004

1. **Registration** - 9.00 am - 5.00 pm. Registration of new students will take place in the Junior Common Room. At Registration you will:
 - a) be requested to produce any LEA financial assessment forms or supporting documentation in connection with Tuition Fees, if not already sent;
 - b) submit a cheque for the full amount of Tuition Fee if you chose this option;
 - c) be given the opportunity to pay your first term's battels invoice, which covers accommodation costs etc.
2. Student Representatives will be available to assist you in finding your room.
3. Lunch available in the Dining Hall from 12.15 pm – 1.45 pm (**only if pre-booked**).
4. Library open for visitors between 12.45 pm – 5.00 pm.
5. Tea, coffee and soft drinks will be available all day in the bar and also from 3.00 pm to 5.00 pm in the Dining Hall for new students, parents and friends.
6. Dinner in the Dining Hall at 6.00 pm.
7. The Bar will be open from 6.30 pm
8. Evening hosted by JCR and Freshers' Helpers

SUNDAY 3 OCTOBER 2004

- 11.30 am Holy Communion, Grey College Chapel, Fountains Hall
- 12.15 pm Lunch in Dining Hall
- 2.00 pm Tutees meet with College Tutors (Venue: Dining Hall plus other break-out rooms to be advised)
- 7.15 pm Formal Dinner with Exec and College Officers in Dining Hall (**Gowns to be worn**)
- 7.45 pm Introduction and welcome by College Officers

MONDAY 4 OCTOBER 2004

8.00 am – 9.00 am Breakfast in Dining Hall

10.00 am – 12.00 am Lectures/Talks/Presentations in Dining Hall including:

Lecture on the Hazards of Fire
Presentations by the Chief Fire Officer (DCC)
Crime Prevention
University Health Centre Talk
Presentation by University Police Liaison Officer

12.15 pm – 1.45 pm Lunch in Dining Hall including Introduction by College Officers

2.00 pm onwards Natural Sciences/Combined Honours Induction Talks
Department Induction Talks/Registration

4.00 pm – 7.00 pm Registration with University Health Centre in the College JCR

TUESDAY 5 OCTOBER 2004

9.00 pm – 1.00 pm Departmental Registration/Freshers' Fair/SPA Registration

2.00 pm – 5.00 pm Departmental Registration/Freshers' Fair/SPA Registration

WEDNESDAY 6 OCTOBER 2004

8.00 am Formal Matriculation Breakfast (**Gowns to be worn**)

9.00 am All new students assemble at the main front door of College to process to the Cathedral: (**Gowns to be worn**)

10.00 am University Matriculation Ceremony

2.00 pm Freshers' Photograph

THURSDAY 7 OCTOBER 2004

9.00 am onwards All Teaching begins!

COLLEGE CHARGES

Academic Year 2004/2005

Michaelmas Term 2004	6 Oct 2004 - 15 Dec 2004
Epiphany Term 2005	17 Jan 2005 - 18 Mar 2005
Easter Term 2005	25 Apr 2005 - 24 Jun 2005

Freshers are invited to arrive in College on Saturday 2nd October 2004 between 9.00 am – 5.00 pm. For undergraduates other than Freshers the Michaelmas Term begins at 9.00 am on Wednesday 6th October 2004. When a term is shown as beginning at 9.00 am all undergraduates are expected to be in residence by the evening of the previous day.

TUITION FEES

This information will be despatched to you at a later date.

BATTELS INVOICES

All sums due to the College are assembled on one termly Battels Invoice. The first Battels invoice will be included in your Freshers' pack which will be distributed on Freshers' Saturday. Settlement of this invoice will be required within 30 days of the invoice date but we would be happy to accept payment on Freshers' Saturday. Most of the following items will be included in your first Battels Invoice, others will be included in your second.

a) RESIDENTIAL CHARGE	£ 1,126.33 PER TERM
Covers the cost of accommodation and 3 meals per day in term. There is no automatic right to residence out of term but if bed and breakfast is provided a daily charge of £10.50 is made.	
	(£3, 379 per annum)

b) LAUNDERING OF MATTRESS PROTECTOR	£14.10 PER ANNUM
We charge a minimal amount to cover the cost of supplying and laundering the mattress protectors.	

c) SPORTS CHARGE	£75.00
One payment of £75 for the use of sports facilities in Maiden Castle.	
For students who will be attending the University for one year only.	£20.00

d) GOWNS

All undergraduates are required to wear gowns at Formal University and College occasions such as the Matriculation Ceremony, Formal Meals and Commemorative Services in the Chapel or in the Cathedral. Please note that you are required to wear a gown at lunch on Sunday, 3 October.

Dress code with a gown is smart (trousers/skirt, shirt/blouse)

Gowns will be available for purchase on Saturday 2 October 2004 charges will appear on your 2nd terms Battels Invoice.

Second hand (limited amount)	£25.00
New	£45.00

e) GREY COLLEGE ASSOCIATION

£7.00 per year

All students are automatically enrolled as life members of the Grey College Association through which past and present members are kept in touch with each other and with the College. Membership entitles one to receive all newsletters, and an invitation to the annual reunion weekend in Durham. The subscription of £21 is added to Battels in three equal instalments over three years. The Durham dinner is free for the first year after graduation.

f) JCR CHARGE

£65.00

This will comprise of

Freshers' week charge (£20.00) plus Battels Invoice (£45.00)

These charges will be used to cover all the services and facilities provided by the JCR. For further information contact JCR President or visit www.dur.ac.uk/grey/jcr/

ADDITIONAL INFORMATION

All students are required to bring their own bed linen ie. Sheets, duvet, duvet cover, and extra pillow and pillow case if required.

Grey College will provide the hire of bed linen for **Overseas and International students only**. The charge for this will be £66.00 per annum.

College provides 3 meals a day, but you do have the option of booking out for lunches Monday - Friday.

Kettles are provided in each bedroom and there are pantries on each floor with a microwave, toaster, fridge and kettle.

No Toasters are allowed in bedrooms as they are a major source of causing fire alarms. (A £50 fine is imposed or the equivalent in community work if through negligence you cause the fire alarm to go off)

Students should provide themselves with sufficient crockery, cutlery etc that they consider they will need to make snacks.

ELECTRICAL EQUIPMENT

All student electrical equipment brought on to the site should have a valid certificate that it is electrically safe.

Spot checks will be made at the beginning of each term to check that students electrical equipment does comply with the regulations. If it is faulty it will be removed and kept by the college until the end of term.

August 2004

Dear Student,

MONEY MATTERS: A MESSAGE TO ALL THE FAMILY

What follows is particularly relevant to UK-based students (those who will pay the "home" category tuition fee of £1,150 in 2004-2005) who are moving into College accommodation in October, and to those students who have never had to budget before. However, even if this does not apply to you a lot of what is here will be useful. So read on...!

1. The Realities of Student Finance or "How to Support Yourself on £5,000 a Year"

How Much?!

The maximum Student Loan home fee-paying students living away from home (not in London) can borrow in 2004-05 is £4,095. Certain students will also be eligible to receive the new government HE Grant worth up to £1,000 depending on their family income. Students who do not receive the maximum Student Loan or maximum HE Grant because their families have been assessed to contribute towards their living costs should make sure that their families provide them with at least enough to bring their income up to the level of the maximum Student Loan plus the maximum HE Grant. **All students, therefore, should have a minimum income of £5,095.**

We believe that a single student with no extra costs – for example those incurred as a result of having children or having a disability – living in Durham City would be able to live a reasonable, if not extravagant, lifestyle in College on £5,095 *per academic year*. The table below shows how.

Home fee-paying students who have extra costs, for example because they have children or because they are disabled, may be eligible to receive extra help from both the government and the University. If this is you check the government website <http://www.dfes.gov.uk/studentsupport/pro.shtml> for information on the extra support available to you.

For single students living in College *per academic year* means in term-time and in the Christmas and Easter vacations (39 weeks). Current government policy means that students are expected to earn enough to keep themselves in the Long Vacation *if they can*. Support is available from the University for those who cannot work, for example because of a disability or child care issues.

We don't include in the above figures *any tuition fees that have to be paid on your behalf or what you need to live on in the vacations* (and we leave a little bit left over for emergencies).

	Per Week over 39 Weeks	Per Academic Year
Residence Charges	N/A (one off payment)	£3,379.00
Contents Insurance	N/A (one off payment)	£39.00
Mobile Phone or Payphone	£2.50	£97.50
Travel	£4.61	£180.00
Leisure	£20.00	£780.00
Clothing and Laundry	£3.50	£136.50
Toiletries	£2.50	£97.50
Course Costs	£6.41	£250.00
Total	N/A	£4,959.50

Remember it is a lot more expensive to live in private rented accommodation than in College. Your expenditure on bills will be higher and you will also have to pay rent all year round. If you have chosen to live in private rented accommodation you will find a sample budget and formation on managing your expenditure on: <http://www.dur.ac.uk/student.support/prospective/costs.htm>.

Supplementing Your Student Loan and HE Grant

The section of this letter called "How Much?!" shows what a single student with no extra costs, living in College, would be able to spend if they decided to live within an income of £5,095. It also provides students who have extra costs with a source of information about the extra support available to them. Looking at this information you may decide that you will need (or want!) to supplement your income.

There are a number of sources of extra income available to students over and above the extra support offered by the government to students with extra costs.

- **Parents and Family:** it is worth repeating that the government expects families to contribute towards students' tuition fees and living costs where they have been assessed to do so. *It is very important that families make a contribution towards students' tuition fees and living costs where they have been assessed to do so otherwise students are seriously disadvantaged.*

Families may also be able to provide students with contributions towards their living costs over and above what they have been assessed to give by the government. Sorting out these contributions can get a bit difficult so in order not to fall out with your family it is probably best to sit down together and work out exactly how much they are going to contribute to your living costs and when. The security of a standing order of a set amount of money per month will really help with managing your money. A useful website about preparing for the world of student finance can be found on the AimHigher website at <http://www.dfes.gov.uk/aimhigher/>. The Durham Students Union (DSU) Website at <http://www.dsu.org.uk/welfare/finance.php> also has a wealth of useful information which you are recommended to read.

- **Bank Overdraft:** students often use their agreed overdrafts as income and, as student overdrafts are interest-free, this is a relatively risk-free way of supplementing your income. You should arrange a bank account with an overdraft as soon as you get to Durham (there are advantages to having your branch in Durham as the banks here are used to dealing with students). You must ask for an overdraft as you do not get one automatically and you must never go over your overdraft limit: you will have to pay bank charges.

Most banks offer up to £1,500 as an interest-free overdraft to students. DSU has a leaflet which lists all the banks in Durham and what they offer in terms of overdrafts which you can pick up when you arrive in Durham. It is definitely worth shopping around to see which bank offers the best deal in terms of overdraft size and also in terms of free gifts for opening a bank account. In many cases banks offer either sensible or silly free gifts, for example, last year one bank was offering a free 4-year Student Railcard (savings of hundreds of pounds) or a book of vouchers for a high street record shop (extra spending on non-essential items). Choose wisely!

A final word about banks: **DO NOT GET A CREDIT CARD!** You will have to pay the money back, in fact lots more money than you've borrowed because of high interest rates, and you will be in serious financial trouble if you cannot repay the money when you are asked to do so.

- **Long Vacation / Term-time Employment:** as indicated in the "How Much?!" section current government policy expects students who do not have childcare responsibilities or other reasons why they cannot work to earn enough to support themselves during the Long Vacations (the summer vacation). If possible it is also a good idea to aim to save some money for the coming year academic year. About £500 is a sensible target.

The Durham University Careers Advisory Service (<http://www.dur.ac.uk/CareersAdvice>) will help you to find work for next year's Long Vacation. There is also a part of the Careers Advisory Service called the Job Shop (<http://www.dur.ac.uk/DurhamJobshop>) which can help you find part-time term-time work. If you need to work in term-time to supplement your income you should take care that you balance part-time work with your academic commitments and

the time you need to relax, socialise and recharge your batteries. If you find that you are having trouble maintaining this balance you should approach the Senior Tutor or Student Support Officer in your College for advice; they will be pleased to spend time talking to you.

- **Benefits:** full-time students who do not have children are not eligible to receive benefits. However all student parents with an income under £58,000 (which will be most of you!) are entitled to receive Child Tax Credits paid by the Inland Revenue and Child Benefit. Student parents may also be eligible to receive Housing Benefit, Council Tax Benefit and Income Support. For more information see http://www.dfes.gov.uk/studentssupport/pro_shtml.

2. Handy Hints

- Getting a Student Loan can be good financial management. It is the cheapest way possible to borrow money as the only interest charged is linked to the inflation rate, the repayment terms are much better than any commercial loan and you only pay the Student Loan back when you earn above a certain amount and can afford to do so!
- Your Student Loan is NOT meant to cover your Tuition Fee payments. If the amount of fees you have to pay is based on your parents' or your partner's income your parents or your partner *must* pay them. If this is not possible, either because your parents or your partners' circumstances change or because they have financial commitments which are out of line with their incomes, you should approach the Senior Tutor or Student Support Officer in your College for advice. Again they will be pleased to help.
- Living in College will mean that you have to pay three large Residence Charge bills, one at the beginning of each term. These bills coincide with the receipt of your Student Loan payment. Use the one to pay the other!
- Some parents like to pay the big bills themselves. Have a think about whether this is a good idea. A big part of the University experience is learning how to be an independent adult....

3. What To Do If Things Go Wrong

If you budget carefully and make sure that you do not live beyond your means you will hopefully not have any financial problems whilst you are at University. However, we realise that it is not always easy to live as a student. If you find that your financial situation is becoming difficult, *tell someone in the University as soon as possible*. There is help available to you.

There are various sources of financial support for students whose income is lower than a reasonable level of expenditure for their personal circumstances.

- **Entrance Bursaries (Access, Medicine and Target Bursaries):** these Bursaries are designed to help home fee-paying students who for financial reasons would not otherwise be able to come to University. They are worth £500, £1,000 or £2,000 depending on your circumstances. You can apply for one of these Bursaries up until Friday 24th September. For more information and an application form go to <http://www.dur.ac.uk/student.support/prospective/financialassistance.htm> or contact Mrs Elizabeth Lovett, who is the University's Admissions Adviser for Student Financial Support Officer, on 0191 334 6116 or E.L.Lovett@durham.ac.uk.
- **Grants or Loans from the Access to Learning Fund:** the Access to Learning Fund is a pot of government money which we can use to help home fee-paying students experiencing financial difficulties. Award values depend on individual circumstances and awards are made

by panels of staff in Colleges. For more information about grants or loans from the Access to Learning Fund and general help and advice on money matters see <http://www.dur.ac.uk/student.support/> or contact the Senior Tutor or Student Support Officer in College. They will prove to be a mine of information. The DSU Advice Centre, which you will be able to contact on the internal telephone network on extn. 41775, will also be able to help.

- **The Durham Students' Union and your College:** the DSU Advice Centre and your College can help with both the practicalities and the emotional effects of finding yourself in financial difficulties. Your Senior Tutor at your College and/or Staff at the DSU advice centre can talk your financial situation through with you and help you draw up a budget. DSU can also give you debt counselling and also deal with creditors on your behalf. The DSU Website (<http://www.dsu.org.uk/welfare/finance.php>) also has a wealth of information on financial matters.

When you apply for an Entrance Bursary or to the Access to Learning Fund you will find that your College will be sympathetic but firm with you. You will have to disclose financial and personal information in some detail and you should expect, if you are in financial difficulties because of lack of budgeting, to have to work with your College or the Durham Students' Union to agree a budget plan as a condition of your award. Don't be put off by this though – we want to help you.

4. And Finally....

As a student your financial needs are not restricted to being able to meet your basic living costs. University is a time when students can get involved in an amazing range of activities, from sport to the arts to charity work to travel and we do not want any of our students' personal development to suffer because of financial need. The University has a small amount of funding available to enable students for whom it would not otherwise be possible, to further their personal development through participation in sport, the arts, charity work, travel etc.

For more information see

<http://www.dur.ac.uk/student.support/current/personaldevelopmentawards.htm>.

With best wishes,

Tony Cleaver
Vice-Master & Senior Tutor

Your Student Loan: Important Information for 2004-5

- This academic year your Student Loan will be paid directly into your bank account by the Student Loans Company. You must, therefore, open a bank account **at least three weeks** before starting University and send the details to the Student Loans Company (tel: 0800 40 50 10).
- This payment cannot be made until you have registered with your department. A list of registered students is sent to the Student Loans Company every day during the registration period and once the Student Loans Company receives this they release your Student Loan for payment into your bank account.
- Depending on when you register, you should receive your Student Loan by **Wednesday 13th October** (the sooner you register, the sooner you will receive your payment).
- You will arrive in Durham on **Saturday 2nd October**. This means that you may have to wait **up to 11 days** for your Student Loan to arrive in your bank account. You should therefore make arrangements to bring enough money with you to cover incidental costs between the beginning of term until your Student Loan arrives (remember that Colleges provide food and you won't have to pay your Residence Charges until after your Student Loan arrives).

Qu: What do I do if I'm worried about managing financially until my loan payment arrives?
A: Contact your College / Society Secretary.

Qu: What do I do if my loan payment doesn't arrive on time?
A: Contact the Student Loans Company Helpline on 0800 40 50 10. Helpline staff will tell you if action is required by the University. If it is contact your College / Society Secretary.

MOTOR VEHICLES

Durham is a comparatively small city and the parking and garaging facilities, which it offers are limited. The proportion of students to the total population is exceptionally high and the streets, for the most part, are exceptionally narrow. The University has neither the space nor the finance to enable it to make adequate provision for parking or garaging facilities for more than a very small proportion of students and staff. Student vehicles must be registered with the College and the Master's permission must be sought before any vehicle may be brought into University or College grounds. Students who wish to keep and use motor vehicles in Durham must comply with University regulations governing the keeping of motor vehicles and in particular must ensure that they can make satisfactory arrangements for the parking or garaging of such vehicles before bringing them to Durham.

All University facilities are within easy walking distance of each other and you are advised **not** to apply to bring a motor vehicle to Durham unless there are special/medical reasons for doing so. If you believe there is a good reason for keeping a motor vehicle in Durham, please make an application to the Master in writing stating the reasons.

PEDAL CYCLES

There are far fewer problems in respect of bicycles but I would wish to advise students who intend to bring bicycles to Durham that they should ensure that these cycles are stored in the College bicycle sheds. Students should note that under No. 6 of the General Regulations of the University, Section 9 headed up Motor Vehicles and Pedal Cycles, the cycles should not be taken inside University buildings. Students who break this regulation are liable to a fine. I apologise for having to raise this latter point but I regret that considerable damage was caused to College property last year by cycles brought into buildings.

Students would be well advised to ensure that appropriate insurance is taken out against loss or theft of cycles.

Finance and Administration Support Office

FIRST YEAR STUDENTS' VEHICLES IN DURHAM

First year undergraduate students will not normally be entitled to a University car parking permit due to the immense problems in the City arising from the parking of cars belonging to students.

All parts of the University are within easy walking distance from one to the other and you will not need a car to access Colleges and Departments: in fact, you will almost certainly find it quicker to walk or cycle than find somewhere to park. You should, therefore, consider very seriously whether you need to bring a vehicle to Durham.

Special arrangements can be made, however, for disabled students who bring a car to Durham; details are available from your College.

PLEASE NOTE: Durham County Council currently charge for residential car parking within Durham City Centre.

Thank you.

Personal Development Planning

Congratulations on securing your place at Durham! You are about to embark on a significantly different phase of your life where you will be facing a large number of new opportunities and challenges.

You may be leaving a familiar world of family and friends and travelling a long way from home, or you may be a mature student who lives locally and is combining study with family responsibilities. You may be studying a familiar subject or a completely new one or taking a combination of subjects in different departments. Whatever your circumstances, studying at Durham will present you with a wide range of academic and personal opportunities. Alongside your programme of study and the intellectual development that that entails, you will have opportunities to get involved in many different activities (sports, music, drama, volunteering and much more) through University and College clubs and societies. These activities will enable you to develop a wider range of skills and abilities – as well as having fun.

You may find that the style of teaching and learning at Durham is rather different from what you have experienced before and you may have to use new study styles to make the best of learning here. In particular you are likely to find that more emphasis is placed on your responsibility for your own learning, for example through private study and research for coursework.

In the longer term – and this may seem very far away at present – you will have to choose options within your programme and eventually your thoughts will probably turn to what you plan to do after you leave Durham.

All this may seem a little daunting at first – and that is very natural. One way to deal with this is to make a habit of reflecting on what you are doing - what is going well, what is more difficult – what progress you have made so far and what your next steps should be – so that you learn from your successes and build gradually on your experience. To help you on this journey through University life we are making Personal Development Planning (PDP) available to all first-year students this year. PDP is designed to support your development as a person through your time at Durham – it is essentially an online framework offering you questions and suggestions to help you think through your experience, record it and plan ahead. There will also be links to material offering support for particular issues such as study skills and employment. The outline overleaf shows you the various elements which contribute to the PDP.

The PDP process will be supported by both your Department and by your College – the precise nature of this will reflect the Department's/College's individual approach. Planning and recording will be supported through Duo – the University's Virtual Learning Environment, which you will also use for some of your study activities.

In the meantime if you have any queries about this aspect you can e-mail me at p.d.p.@durham.ac.uk

Dr Lowry McComb
PDP Project Officer

PDP Structure

The outline below shows some of the elements that will contribute to your PDP.

Introduction

Introductory statement

Your background

Qualifications
Work experience
Extra curricular activities
Key strengths
Key areas for improvement

Your goals

Academic goals
Personal goals

Your learning style

Discovering how to learn
Learning log

Planning

Academic planning
Personal planning
Financial planning

Transferable skills

Skills audit

A month into University – a review of progress

Reflecting on your achievements so far – beginning of Epiphany Term

Review of your first year

Developing your study skills

How do I learn effectively?
Getting started and getting organised
Reading
Note taking
Writing essays
Writing a report
Revision and exams



GREY COLLEGE JUNIOR COMMON ROOM

George Whalley
JCR President
Grey College
South Road
Durham

DH1 3LG

August 2004

Dear Fresher

First of all I would like to welcome you on behalf of all the students at Grey College. This letter is designed to give you a glimpse of college life, as well as provide you with some valuable information about your first few days and weeks at Grey. This information should hopefully make your transition into student life as smooth as possible, and happily integrate you into undoubtedly the friendliest (and best) college in Durham!

Moving on to the introduction. My name is George Whalley and I am the JCR President. I finished my degree in Geography last year, and have been elected by the students to be President for this year. I work full time for the students (that means that I am your employee) but there is a limit to what I will do for you!! I am paid to make sure that everything to do with the JCR (the students at Grey) – including all services and facilities – runs smoothly. Therefore I am often the first person you will come to, whether it be to ask for information, help or advice; or simply just for a quiet, middle-of-the-day chat. As I don't have to study, you can find me 24 hours a day. Hopefully some of you will already have met me this year when you came for open days, interviews or just for a tour of the site.

THE JCR

The JCR (Junior Common Room) is essentially the student body and all of the events, services and businesses that it runs. This encompasses many things from a varied social calendar to a bar and shop; from a fantastic welfare support team to a cultured art scene; from JCR finances to dozens of thriving sports, clubs and societies. Some of this might be of interest to you and some of it not so, but all of this is **run by the students for the students** and hence gives members of the JCR an enormous opportunity to get involved. The beauty of the system is that even if your specific interest or hobby isn't accounted for, there is funding available for you to set up a club or society yourself and get others interested.

The JCR Executive Committee ("Exec") are elected each year to run all of the things that the JCR do, and are superbly supported by a team of ex-officios. They are in charge of such things as art, the summer ball, the library, the shop and sports. Further support comes via the club and society captains and in fact every member of college – every time you buy a pint, read a paper, play for a team or turn up to an event or JCR meeting you'll be contributing to college life. In Grey we also have a welfare team. This comprises of 7 people. There are 2 welfare officers (one male, one female), 4 welfare representatives, and the college president. These 7 people all hold the same responsibility and have signed confidentiality documents. These people are available to talk to 24 hours a day and hold regular welfare hours.

The extent to which you get involved in college activities is completely up to you. You can choose to take no greater part in college life than drinking in the bar or going to social events, or you can participate in clubs and societies: from football to theatre; art to editorial skills; the boat club to the cheese society. My advice however is to really go for it! Whatever you are into, there will be something here that allows you to thrive and thoroughly enjoy your time at university. For those who are really keen, quite soon you could find yourself running an aspect of college life or even assuming the Exec position of Freshers rep or others.

A-Z OF THINGS TO REMEMBER TO BRING

This is a list of all the things I wish I had been told to bring and will hopefully prevent you from spending hours travelling up on your first day cursing yourself for all the things you have forgotten to bring...just like I did!

- ✓ Address book (to keep in touch with friends and relatives)
- ✓ Alarm clock
- ✓ Bank cards and details
- ✓ Ball dresses and black tie dinner jackets
- ✓ Birth Certificate
- ✓ Books – both bedtime reading and anything to help with studies such as old school notes
- ✓ Coat hangers
- ✓ Camera
- ✓ Cheque book and paying in book
- ✓ Clothes
 - a good range is needed for Durham with its ever changing weather.
 - any old clothes of your parents, or party gear for the countless fancy dress/70s occasions
- ✓ Cutlery, crockery and pans for snacks, tea towels, washing up liquid and a washing up brush
- ✓ Diary (to keep up to date with which lectures you've missed)
- ✓ Duvet (College only provides linen for overseas students)
- ✓ Extension cable (the four gang extensions are useful, most rooms only have 2-4 sockets)
- ✓ Food – you may want a small selection of biscuits, chocolates, tinned soups, pasta, bread, etc for those tough study moments or missed meals
- ✓ Iron and ironing board (though college do have some)
- ✓ Laundry bag/box and washing powder, (tokens for the washing machines and tumble dryers can be purchased from the college reception, however you may prefer to bring a clothes horse)
- ✓ Mugs (you can never have enough)
- ✓ Photos of friends and family
- ✓ Pillow (college supplies one but you might want more)
- ✓ Posters and Bluetack
- ✓ Small sewing kit (with crash course) to repair those small nicks in your favourite clothes
- ✓ Shoe polish, brushes etc.
- ✓ Sports equipment – rackets, balls, boots, pads, cues, etc
- ✓ Stereo
- ✓ Study materials, including pens, pads, calculators, dictionaries, etc
- ✓ Smart clothes (suit, shirt and tie for blokes, blouse and skirt/dress for girls)
- ✓ Tissues, lemsip and paracetamol (the infamous fresher flu – more realistically known as a student's cold/hangover – will get most of you in the first term)
- ✓ Towel racks for radiators
- ✓ Towels, wash kits and all accessories associated with this including cosmetics, contact lenses, spare glasses, nail clippers, hair clippers (if you so desire), etc
- ✓ Umbrella/ Waterproofs (not essential, but sometimes it rains)
- ✓ Underwear – just in case you forgot
- ✓ University information sent to you with this letter, including forms from your LEA especially regarding tuition fees

NB. If you want to bring a television you may, but remember you are responsible for getting a TV license. You are not allowed toasters, candles or joss sticks in your rooms due to fire regulations

but each room is provided with a kettle (its only a 2 cuppa at max so you may want to bring a bigger one).

That's about all I can struggle to remember at the moment (that's old age for you), but don't worry the list above isn't made of necessities, just things you might want to consider bringing that you might not have thought of. Despite what your friends might think, Durham isn't in the middle of nowhere and you can actually purchase some of these things should you realise you need them later on – I mean, we've even got McDonalds.

INSURANCE AND MONEY MATTERS

Your belongings will not be covered by college insurance. It may be possible to add your possessions to your parents' home insurance so this is worth checking. Alternatively you could get in touch with a student insurance company. Insurance for the year can cost as little as £30 and although theft in college is extremely rare, you may wish to take out a policy for peace of mind.

When thinking about your own personal money the key is to plan in advance. Pacing yourself is the key as, 10 weeks can be quite a long time and it always seems that the best, and costliest events happen at the end of term –just when you're the most strapped for cash. So in the first few weeks, keep the wallet/purse closely monitored; explore all the options regarding bank accounts, the job scene and tips on how to save money and cut costs. When you arrive we will provide you with a list of events (with approximate prices) so that you can budget. Talking to us 'has beens' can be very enlightening, we know all the money saving schemes – and then let the money and the good times roll.

COLLEGE PARENTS

When you arrive you will be given a college parent or two. They will be a current second, third or fourth year who will usually do your subject. They should introduce themselves either in the first few days (or even during the holidays) and will be there to give you a more personal perspective of Durham and hopefully answer any simple questions that you may have. They are also a goods means of introducing yourself to other current students and may be able to provide you with cheap textbooks or even help with your course if you're lucky! By meeting parents you'll be surprised how quickly you get to meet everyone in college, we even organise a 'Parenting Formal meal' in the second week to aid this along.

FRESHERS' WEEK

In the first few days of term in October almost everyone you meet will be a fresher, so introduce yourself (try to think of something other than where do you live? What course are you doing? And what A-levels did you do? Because you really will get bored of using those icebreakers after a couple of days!) However the Exec and freshers helpers will also be around to organise all the events in Freshers week and help you settle in. They will all be easy to spot during Freshers week as they will be wearing t-shirts with their names on them, and they will hopefully look like they know what they're doing (although I sometimes doubt that!). Don't hesitate to ask them about anything you don't understand. We've all been there before and realise that it can be a little daunting at times - we're still to perfect our icebreakers ourselves!

You will be pleased to know that lectures don't begin as soon as you arrive. Instead there will be formal requirements such as talks and course registrations during the first couple of days and we put on all sorts of entertainments during the evenings. It will be a very hectic and tiring week, but if the last three Freshers weeks are anything to go by it will be great fun. Get lots of sleep the week before you arrive!

Throughout the whole week there will be Freshers helpers accompanying you everywhere so don't worry about finding departments or the more formal events. The JCR/Bar area is the meeting place for everything, unless otherwise stated. If you ever need to ask a question, there'll always be someone around the JCR to help find an answer.

ACCOMMODATION AND TRAVEL

If you are travelling to Durham with your parents, and they are looking to stay overnight, bed and breakfasts or hotels are in abundance. Do try and book early however as things are obviously busy at this time of year. If you are travelling by train or coach, it is advisable to book a seat in advance, as there will be a lot of students travelling to Durham. Traffic around the college and the city centre will also be highly congested over the weekend. The best advice that I can give you is to arrive earlier rather than later as the queues get bigger and bigger as the day goes on.

To get to the college from the A1, first follow signs to city centre. Drive straight across at the Hild and Bede roundabout, down a steep hill and then take a left over the river at the roundabout by the shopping centre. Carry straight on up the hill, past 3 sets of traffic lights. When you reach the New Inn Pub keep going straight on, and then take the 2nd left, which should be sign-posted as Grey College. We'll be waiting for you!

AND FINALLY...

I realise that there's a lot of information in this pack so don't worry, as long as you get here we can sort everything else out. The whole point of this university thing is to enjoy yourself for a few years, and to stress as little as possible, while enjoying your surroundings. The important thing for you now is to enjoy your holiday and look forward to your time here. I look forward to meeting you all in October and hope that you have a great summer.

If you have any queries before the start of term then please don't hesitate to write to me, e-mail me at grey.president@durham.ac.uk or phone me on 0191 334 5620. Don't worry about how trivial the question is, my memories of being a fresher are still quite clear, and it can at times seem a little daunting. If I can reassure you or answer any questions, I will be very glad to do so. Once term begins everything will happen very fast, but please get involved and make the most of your time at Grey. Please talk to any member of the Exec if you have any problems and we will try to help you settle in as quickly as possible.

I look forward to seeing you soon,

George Whalley
Grey College JCR President

Grey College Ents Card!

Dear Fresher,

This letter is to let you know about the 'Grey College ENTS CARD! This should help you plan your budget best throughout the year, and choose which events you want to go to well in advance. If you buy the ENTS card you get the following great advantages: -

- You **save money** on college events! Each ticket that you buy for an event will be at a reduced price because of your card (see table below for savings)
- On certain events like the Ball you can buy your tickets a day before many others; therefore giving you a **priority ticket**! For 1st years this is usually essential if you want to go the meal at the Summer Ball.

College events are by far the cheapest ways to have a good time in Durham; cheap drinks, entertainment and great friends all make them times to remember! For just £20 you could make these events even cheaper and make sure that you get a ticket. The table below outlines the savings you could make.

Events	Ticket Price	Proposed Discount	Discounted Price	No of Events	Maximum Saving
Standard Bops	£4.00	£1.50	£2.50	4	£6
Formals	£3.00	£1.50	£1.50	10	£15.00
Guest Night	£30.00	£3.00	£27.00	1	£3.00
Fireworks Bop	£5.50	£2.00	£3.50	1	£2.00
Informal - Meal	£20.00	£3.00	£17.00	1	£3.00
Ball - Ents	£10.00	£2.00	£8.00		
Phoenix - Meal	£55.00	£10.00	£45.00	1	£10.00
Ball - Ents	£30.00	£5.00	£25.00		

Therefore, if you go to all of the events you could save up to £39 on ticket prices! If you fancy buying one, read the terms and conditions overleaf and send the form below back to me, George Whalley at Grey College. See you in October!

Please cut or tear here...

ENTS Card Terms and Conditions

- i. Tickets to all events are subject to availability.
- ii. Grey College JCR / appointed security reserves the right to refuse admission to or remove individuals from events.
- iii. 'Ents Card' is available to Grey College JCR members only.
- iv. The cost of the 'Ents Card' is not refundable in whole or in part.
- v. This card is valid for one academic year only, 2004/2005.
- vi. Event tickets may only be purchased for and by the cardholder.
- vii. The 'Ents Card' provides guaranteed discounts only for the events listed, subject to the Terms and Conditions of use. Other selected events may be added at a later date. Events organised / administered by Grey College JCR not listed are not necessarily subject to any discount or priority/advanced ticket purchase.
- viii. Grey College JCR reserves the right to amend the calendar of events and their cost, including re-scheduling or cancelling events.

FREE T-Shirt

Hello!

Congratulations on getting your results and well done for choosing Grey!

Traditionally freshers receive a Fresher T-Shirt on arrival at college. They are a great reminder of your first year at college as it has the names of everyone in your year on the back! And, it's absolutely free!

We want your first t-shirt (of many to come) to fit you, so please complete the form below and return it ASAP. If we don't get your form, you'll still get that t-shirt, it'll just be in a Large size.

I look forward to meeting you soon!

Liz

Email: e.a.drysdale@durham.ac.uk

Mobile: 07834754516

GRADIBUS ASCENDIMUS

GREY COLLEGE

*South Road
Durham
DH1 3LG
UK*

Email: k.l.stephenson@durham.ac.uk

BED LINEN

International/Overseas students **NOT** requiring the College to provide bed linen are required to complete this form and return it **NO LATER THAN WEDNESDAY 15 SEPTEMBER 2004**. There will, however, be a charge of £14.10 to cover the cost of replacing and laundering the underblanket and pillowslip, which are used to protect the mattress and pillows.)

IT WILL BE ASSUMED THAT ANYONE NOT RETURNING THE FORM BY 15 SEPTEMBER 2004 WISHES TO USE COLLEGE DUVETS AND LINEN **FOR THE ENTIRE ACADEMIC YEAR** AND YOU WILL BE CHARGED £66.

Kellie Stephenson
ADMISSIONS/TUTORIAL SECRETARY

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www.dur.ac.uk/faculty.handbook



University
of Durham

STUDENT SURVIVAL GUIDE

2004 - 2005

Please read this carefully and keep it for reference until you leave Durham at the end of your degree programme

information in this Guide is correct at the time of going to press in July 2014. The University, however, reserves the right to make changes without notice. If there is any conflict or disagreement between the information in this Guide and that contained in the University Calendar, the Calendar is definitive.

Note: If you require a larger print of this Guide please contact Melanie Farrell
Email: m.j.farrell@dur.ac.uk
Telephone: 0191 334 6122

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WELCOME TO DURHAM!

Welcome to Durham University – to the University as a whole, your academic department and your college. We hope that you will enjoy your time here and make the most of the very many and varied opportunities available to you. That includes the opportunity to study a high quality programme and to take part in a wide range of extra-curricular activities including sport, music, drama, community action, charity fund-raising and many other things organised through your college or DSU (the Durham Student Union).

The vast majority of students successfully complete their degrees and the drop-out rate for students who leave the University without a degree is one of the lowest in the country at around 4%. However, there will inevitably be occasions when you feel that you need assistance and there are a number of people to whom you can turn. **This guide aims to give you basic information about what is required of you, what you can expect and where and how to get help. Please read it and – more importantly – keep it carefully for future reference. It is also on the website at <http://www.dur.ac.uk/faculty.handbook/>.**

For academic problems, the main source of help will be provided in your department. Do not be afraid to approach an appropriate member of your department (e.g. tutor, year co-ordinator, programme leader), the Head of your Department/School or, where appropriate, the Director of Combined Honours in Arts and Social Sciences or the Sub-Dean of the Faculty of Science. If you believe that the nature of the issue you wish to discuss makes it awkward for you to approach somebody in your academic department, you should discuss the matter either with your College Tutor or with the Dean of the Faculty.

We have not reproduced all the regulations concerning student matters in this guide because it would become huge and we suspect no one would read it. Instead we have summarised the key points concerning your progress as a student. Remember, however, that guidance notes like those in this booklet often attempt to explain or summarise complex issues which are set out in detail in the university regulations – when this happens these notes cannot take precedence over the university regulations. You will find **further information** on the web and in other publications. The most important reference materials are:

- the **University Calendar** - an extensive publication listing degree regulations, codes of practice, statutes and university regulations, members of staff, departments and committees. Reference copies are available in departments, the University Library and the Information Resources Centre at Queen's Campus and it is also on the web at <http://www.dur.ac.uk/university.calendar/>;
- the **Faculty Handbooks** available on the web at <http://www.dur.ac.uk/faculty.handbook/>. These include the regulations and module summaries for all undergraduate programmes;
- the **Teaching and Learning Handbook** available on the web at <http://www.dur.ac.uk/teachingandlearning.handbook/>. This summarises procedures in respect of all aspects of teaching and learning. Although it is primarily intended for members of staff it is not a secret document and you may find it useful to consult it on occasions.

You will also be provided with a handbook and other information by your department and college. It is very important that you read this and understand departmental and college requirements and procedures. You will also find a 'plain English' guide to aspects of the regulations on the web at http://www.dur.ac.uk/undergraduate.section/curriculum_development.htm.

YOUR COLLEGE OR SOCIETY

Durham is a collegiate University and all undergraduates are members of a College or Society. As well as providing residential and social facilities, the Colleges play an important pastoral role and college tutors take a personal interest in their students' academic progress and welfare. While Colleges are not teaching bodies, they have academic support facilities, notably libraries and computing facilities. Your College or Society will

provide you with important information about their facilities and services and also about other aspects of university life.

Students who 'live-out' remain members of their College or Society and are encouraged to enjoy the privileges and responsibilities of membership of those communities no less than those who 'live-in'. In addition to being a focus of social and recreational life, your College or Society remains an important point of contact, not only for advice, general information and help, but also with the University on official, academic matters. For example, it must be able to get a message to you in an emergency. You therefore **must** keep your College or Society, and also your Department or School, informed of your correct Durham address if you are 'living-out'. **However, you are expected to continue to collect mail sent to your College or Society.**

It is also important to keep your College or Society informed of any illness or problem affecting your academic work, especially since your College or Society has an important role to play in initiating and co-ordinating academic concessions. Should you need to apply for a concession relating to your programme, please contact your College or Society for information on how to proceed. (A concession is in effect permission to 'break the rules' – miss some classes because of family problems, for example, or take a module which is not normally permitted under the regulations). Remember that a concession may be applied for by your college or department but only the Dean can agree to give you one. **You must never assume that a concession will be granted just because it has been applied for.**

The University will not normally disclose the addresses of students to third parties. There is an important exception to this rule. The University does inform Durham City Council of student term-time addresses so that full-time students can be exempted from paying the Council Tax.

STUDYING AT DURHAM

A Quality Experience

We make every effort at Durham to provide you with a high-quality learning experience during your time here and we ask for your help to maintain and enhance that quality for yourself and for the students who come after you. All departments in the University take care to consult students about academic programmes and the standards of teaching provided. This includes questionnaires which are a valuable means of finding out what students think of the programme. Please take the time to complete these questionnaires fully when you are asked to do so. All departments also have a staff/student consultative committee or similar body with elected student representatives who can present the views of the students to members of academic staff: please use these committees constructively to help us make our programmes even better! Remember that you are benefiting now from the comments of previous students which will have led to changes in teaching, learning and assessment.

The Quality Assurance Agency monitors the quality of teaching provided in universities and other higher education institutions through a rolling programme of reviews which has now covered all subject areas in the University. Copies of the QAA reports are available on the QAA website www.qaa.ac.uk. Initial teacher training is reviewed by the Office for Standards in Education (Ofsted) and some subject areas are also accredited by appropriate professional bodies. The QAA has recently conducted a full audit of our programmes and other aspects of the student experience, and has given us a judgement of 'broad confidence' in what we offer to students and the way in which we ensure its quality. QAA audit reports can also be found on the QAA website.

Registration

One of the first things you will need to do when you arrive at the University is to register to study here. This makes sure that you are listed as one of our students and gives you access to the facilities you will need such as IT and the library. Registration includes confirming your choice of modules – your department or the Director of Combined Honours (for Combined Honours in Arts and Social Sciences) or the Sub-Dean of the

Faculty of Science (for Natural Sciences) can give you advice about this. For Level 1 this takes place at the start of the Michaelmas (autumn) Term.

For Levels 2 and 3 (and where applicable Level 4) you will register before the end of the previous academic year (ie before you go home for the summer vacation). You are expected to stay in residence until the end of the term and therefore to be at the University to register. In exceptional circumstances permission can be given for students to register early and then leave Durham; however, such permission is normally granted only where there is good academic reason. If you fail to register at this time without permission and register when you return in the autumn, a late registration charge will be made. Students who do not register at the correct time may not have access to guidance from their department(s) and may not be able to take their first choice modules.

If you wish to change one or more modules, or even the degree programme you are studying, you must seek advice from the department(s) concerned at the earliest opportunity. Although we do our best to help students who wish to change module(s) or programme, it becomes progressively more difficult to change modules or programme as time goes on, because of the amount of work which you will have missed, and changing modules or programme is not an automatic right. You also need to satisfy any pre-requisites for the module(s) or programme to which you wish to change. After four weeks into the start of the academic year you need special agreement from the department(s) concerned to show that they are satisfied that you can make up the work missed, and later in the year you would need to apply for a full concession. If you do change modules or programme it is your responsibility to catch up the work which you have missed.

If you wish to change your module or programme registration **within four weeks** of the start of the module or programme to which you wish to transfer you should obtain the help of your department to:

- complete a change of registration form which can be obtained from your department or from the Student Planning and Assessment Section of the Academic Office. This is located at Durham in University Office, Old Elvet, and at Queen's Campus in the Holliday Building;
- obtain written endorsements on the form from the appropriate departmental representatives and, where applicable, the Director of the Combined Honours degrees or the Sub-Dean of the Faculty of Science;
- return the completed form to the Student Planning and Assessment Section.

If you wish to change your module or degree registration **after more than four weeks** you should obtain the help of your department to:

- complete a change of registration form which can be obtained from your department or from the Student Planning and Assessment Section of the Academic Office. This is located at Durham in University Office, Old Elvet, and at Queen's Campus in the Holliday Building;
- obtain written endorsements on the form from the appropriate departmental representatives and, where applicable, the Director of the Combined Honours degrees or the Sub-Dean of the Faculty of Science;
- return the completed form to the appropriate Dean's Office;
- make arrangements for your 'receiving' department to forward direct to the Dean of the 'receiving' faculty a special case in writing to request the change of registration.

If you wish to change your module or degree registration **after the start of the Epiphany (spring) Term** you should ask your department or college to submit a concession request for consideration by the Dean. You should never assume that such a concession will be granted.

Getting the Balance Right

How you balance your activities at Durham is entirely up to you – some people get involved in one area of extra-curricular activity to a high level, others have a wider range of more general interests, or you may prefer

not to take on any formal commitments outside your studies. You will also want to ensure that you have 'time for yourself' – to go out with friends and enjoy the lively social life that university offers. It isn't always easy to get the balance right and you may find it difficult at first. You must remember that above all you are here to study and ensure that you give yourself quality time for your academic work. We have rules about attendance at classes and the submission of coursework on time (see below under Keeping of Term) which are in your interests, to make sure that you don't fall behind or that, if you do, your department picks it up and helps you get 'back on track'. In general, though, at University we will treat you as an adult who is responsible for him/herself. If you are struggling or need help or guidance please ask!! There is plenty of support and advice available through your college, department and other support services (details are given in the sections below) and you must feel free to make use of it as and when you need it. That's what it's there for and it does not reflect badly on you if you ask for help: on the contrary it is a sign of responsibility to recognise the need for it.

A Study Routine

Studying at University may be very different from what you have experienced at school. Mature students may not have been used to studying at all in recent years. It is very important that you attend lectures, practicals (where applicable), seminars, and other sorts of classes. Your department will have its own rules about which classes are absolutely compulsory. In general these include practicals, seminars and tutorials but may also include lectures; it is your responsibility to know what the rules are in your department and abide by them. But these 'contact hours' will not provide you with all the information you need to get through your programme of study. You will be expected to do a lot of studying in your own time. Depending on your subject area this will involve reading round the subject (using the reading lists provided for each module), writing essays, doing regular 'practice' exercises (in languages or maths for example), preparing for seminars (so that you have a grasp of the topics which will be discussed and can get the most out of the seminar), preparing presentations or working on long-term projects.

It is very important that you work regularly and methodically at this private study. If you let the work build up you will quickly get behind, you won't understand what is being discussed in lectures or classes and you won't give yourself enough time to prepare essays and other coursework. Many modules include coursework which is either formative (it gives you the chance to practise but the mark doesn't count towards the final mark for the module) or summative (in which case the mark does count for the module). All this work will have deadlines which you must meet. As you will be taking up to 6 modules at any one time you are likely to have several pieces of work 'on the go', each with their own deadline, so it is essential that you work steadily and plan ahead. If several deadlines come together (say at the end of term) it is especially important that you plan your work to make sure that you don't concentrate on one thing at the expense of another.

Degree Programme Regulations

The University has regulations which ensure a common standard for each type of award – so that there is comparability between the number and level of modules which you take whether your degree is in English or Physics or Archaeology. All degree programmes are built up from modules which are each worth 20 credits or a multiple of 20 credits (ie 40 or 60) and the University regulations, which are known as the 'core regulations', require you to pass the right number of modules at the right level for each award. At the end of this guide is a set of flow-charts which provide an outline guide to the University's core regulations, showing how many modules you need to take and pass at each Level for each award and what happens if you fail some of the modules – for example whether you can resit or not. You can find the full core regulations in the University Calendar (volume II), website <http://www.dur.ac.uk/university.calendar/>.

Within this overall framework each degree programme has its own regulations which detail exactly which modules you have to take at each Level of study and any other specific requirements or options. You can find these in the Faculty Handbooks (see the website <http://www.dur.ac.uk/faculty.handbook/>) and it is your responsibility to make sure that you understand what is required of you. If in doubt, ask in your department.

What if...?

Juggling a demanding workload, other activities, and, on occasions, personal or family problems isn't always easy. If you do run into difficulties please ask for help! There is often quite a lot we can do if you ask for help early enough. If you don't, it can get to the stage where you are so far behind that you can't catch up, even with help. So **what if...?**

- **...you are ill for a few days but it's not serious enough to go to the doctor:** tell your college and your department so that your tutors know that you won't be in classes. You are allowed to self-certify illness twice a term for up to 5 days on each occasion. There is a form for this which you can find on the web at <http://www.dur.ac.uk/teachingandlearning.handbook/> (go to section 6.1.4.14 and appendix 4) or get from your college. You must send this form (with the correct signatures) to your department as quickly as possible – if necessary after you return from being ill and are able to deal with it;
- **...you are more seriously ill or have a minor but recurrent problem:** go to the doctor! You must also inform your college and department so that they don't chase you for failing to attend classes or submit work. If the doctor judges that your illness is serious enough to disrupt your studies he/she will give you a medical certificate to explain the situation to your department: there is a procedure to enable your college to obtain a medical certificate for you from your doctor – ask your college about this or see the Teaching and Learning Handbook at <http://www.dur.ac.uk/teachingandlearning.handbook/> (go to section 6.1.4.14 and appendix 18);
- **...a member of your family is ill and you have to go home:** tell your college immediately if you need to take time 'out of residence'. Tell your department or make sure that the college will tell the department. There is a procedure (called a 'grace period') which can be applied for to give you a concession to miss classes and submit work late. This makes sure that your department doesn't just think you haven't been taking your work seriously and gives you some 'breathing space' while you deal with your family problems;
- **...you wish to be away for a university sporting commitment:** collect a Sporting Concession Form from your college, the University Sports Centre or DAU (the Durham Athletic Union) or print it off the web at <http://www.dur.ac.uk/teachingandlearning.handbook/> (go to section 2 appendix 2). Complete the front page yourself, and then negotiate with your department(s) alternative arrangements for any academic commitments. Once the form has been signed by your department(s) you should send it to the Director of Sport at the University Sports Centre who will decide whether to approve the request;
- **...you don't understand the work:** ask the lecturer concerned or another appropriate member of the department. Depending on the departmental arrangements this might be the year co-ordinator, your tutor or the director of undergraduate studies;
- **...you feel you are on the wrong degree programme:** talk to a member of staff in your department or, if you are in the Faculty of Science, make an appointment to see the Sub-Dean of Science;
- **...you have problems studying as a result of a disability:** contact DUSSD (the Durham University Service for Students with Disabilities). This service can help you with temporary disabilities which affect your studies as well as with permanent disabilities and with both physical and mental disabilities – from mobility problems to ME, from dyslexia to visual impairment. It is also sensible to make sure that your college knows your situation and to inform your department so that you can discuss with the relevant lecturer(s) what steps can be taken to help you;
- **...you feel unhappy, lonely, depressed:** talk to someone. This may be a friend, a tutor or a support group such as Nightline (telephone number on the back of your campus card), or you may want professional help in which case see your doctor or visit the Counselling Service;
- **...you are worried about your financial circumstances:** talk to the Senior Tutor or Student Support Officer in your College in the first instance. The University is able to help students to apply for financial support towards living and programme costs and to provide advice on budgeting and money management. The DSU Advice Centre also provides students with a wide range of financial advice.

The main things to remember are: tell your department, tell your college and get help. Make sure that you know who the point of contact is in the department. This should be made clear in the departmental handbook. If it isn't, ask. There are further details on the support services, including contact telephone numbers, later in this brochure. See further below for guidance on more serious situations.

Remember that a doctor will only give you a medical certificate if he/she believes that your illness is serious enough to justify one. A doctor will also not give you a certificate retrospectively (because you tell him/her that you 'were ill') if you didn't go to see him/her at the time and have no residual symptoms. It isn't acceptable to try to force a doctor to give you a medical certificate for academic purposes – you have to accept his/her professional judgement about whether a certificate is medically appropriate and the University will support the doctor's professional decision.

Departments also have procedures to grant extensions to deadlines for submitting assessed work where there is good cause. This is separate from the self-certification of illness process. (See further on late submission of assessed work, below.)

'Mitigating circumstances'

These are circumstances beyond your control - for example, illness or bereavement - which have affected you so badly that your work is affected. It is very important that you tell the relevant people of your problems as soon as they arise (see 'what if...?' above). In addition if you think that your work has been seriously affected you can inform the Board of Examiners which decides on your final assessment at the end of each year. The Board of Examiners has discretion to take 'mitigating circumstances' into account when reaching a final decision about your assessment. You must inform the Board of Examiners before they meet – afterwards is too late! Your department can give you the date of the meeting of the Board of Examiners and tell you to whom you need to send the information. You can also get advice from your college and you are strongly recommended to do so.

To pass this sort of information to the Board of Examiners you need to complete a mitigating circumstances form. The intention behind this form is to help you make clear to the Board of Examiners what your problem was and what effect it had on your work. The effect on your work is of course the point: the Board of Examiners is not trying to decide whether you had a problem but what difference it made to your academic performance. If you can substantiate your information with a doctor's certificate or other evidence from an independent professional such as a counsellor or member of DUSSD, do so. (Your college will have the originals of any medical certificates which have been obtained through the college from a local doctor.) You can obtain a copy of the mitigating circumstances form from your college or on the web at <http://www.dur.ac.uk/teachingandlearning.handbook/> (go to section 6 appendix 21). The form has detailed explanatory notes which you should read carefully.

It is very important that you realise that you must tell the Board of Examiners of your problems separately from anyone else you may have told. You must not assume that because you have told someone in the University (your college tutor, a counsellor etc), other people or groups will know. In fact it could be improper of us to pass this information on – it could contravene the Data Protection Act. Information given on your UCAS form is also not carried forward to Boards of Examiners for the same reason. So if you want the Board of Examiners to take 'mitigating circumstances' into account you must take steps to tell the Board specifically. You should also be aware that, if you have had an examination concession (for example to give you extra time in an exam because of a medical problem) the Board of Examiners will not take your circumstances into account over and above the terms of the concession unless you bring the circumstances to the attention of the Board. In such cases you would be expected to show that your situation was not adequately catered for by the concessionary adjustment. (This is covered in the mitigating circumstances form.)

You also need to realise that the Board of Examiners can only use its discretion to change its decision about your assessment if it is convinced that your performance was seriously affected at the time and has evidence that your normal performance was at a higher level. Also, the Board of Examiners cannot change the mark you get for a module. It can only use its discretion to decide that, despite having a low mark in a particular piece of work, it will give you a higher class of degree or allow you to progress to the next year of study because of the special circumstances.

For further details about this process see the Teaching and Learning Handbook <http://www.dur.ac.uk/teachingandlearning.handbook/> section 6, especially 6.1.4.14

'Keeping of Term'

The University requires you to 'keep term' – that is to fulfil your academic commitments by being in residence in Durham or Queen's Campus during term time, attending classes and submitting the work required on the dates and times when it is due. It is your responsibility to make sure that you know which classes your department regards as compulsory and when and where work has to be handed in. If you're not sure, look in the departmental handbook and if it's not clear, ask.

If you don't 'keep term' for whatever reason you will be asked by your department why you have missed classes or failed to hand in work. This is to enable us to identify any problems you may be having. If your department thinks that you need help to get 'back on track' with your work, the 'Keeping of Term' process will be invoked. This involves referring you to the Dean of the Faculty or his/her deputy who will set targets for you to ensure that you attend classes, catch up on work you have missed and do your next assignments on time. If it becomes clear that you have particular problems the Dean will recommend sources of help. However if you have no good reasons for failing to fulfil your academic commitments and you don't get back into good study habits by meeting the targets set for you, you can be required to leave the University.

For further details about this process see the Teaching and Learning Handbook <http://www.dur.ac.uk/teachingandlearning.handbook/> section 2.1.3

Late Submission of Assessed Work

If you submit work late it will receive a mark of 0. Make sure that you know when and where to hand in work. Plan ahead and leave time for last-minute problems such as the computer crashing. Always back up work done on a PC.

All departments have a procedure for requesting an extension to a deadline in the case of genuine problems such as illness. But you must put the request in as soon as the problem arises (ie before the deadline passes) and problems such as 'I couldn't find a free PC' don't count – you need to plan ahead! Make sure that you know what the procedure in your department is – it should be in the departmental handbook. If it's not clear, ask.

Cheating in Examinations and Other Assessments

Any form of malpractice associated with assessment of any kind is a serious matter which can result in expulsion from the University without the award of a qualification. Such malpractice may take the form of:

- **plagiarism:** unacknowledged quotation or close paraphrasing of other people's writing, amounting to the presentation of another person's thoughts or writings as one's own. This includes material which is available on the world-wide web and in any other electronic form;
- **collusion:** working with one or more other students to produce work which is then presented as one's own in a situation in which this is inappropriate or not permitted and/or without acknowledging the collaboration;
- **impersonation:** presenting work on behalf of someone else as if it were the work of the other individual;

- **cheating:** using any inappropriate or unauthorised means to achieve credit for a piece of coursework or an examination answer;
- **use of inadmissible material:** using material which is not permitted to achieve credit for a piece of coursework or an examination answer.

The University reserves the right to check student work using the JISC Plagiarism Detection Service software and provision for this is made in our Data Protection Statement to which all students agree at registration (see appendix IV). It is also a disciplinary offence to use your academic work produced at Durham for an unethical purpose or in a way which would bring the University into disrepute, for example by facilitating plagiarism. So for example it would be an offence to supply a copy of your own essay to a web-site which would allow other students to plagiarise your work.

Full details of the regulations regarding assessment can be found in the University Calendar, volume I General Regulations, Sections VIII and XI <http://www.dur.ac.uk/university.calendar/>. Further information is also available in the Teaching and Learning Handbook, Section 6.1.4.4 <http://www.dur.ac.uk/teachingandlearning.handbook/>.

Tuition Fees

All students are responsible for ensuring that the University receives payment for their tuition fees. The fee for full-time UK (Home) and EU students is set nationally by the Government. Depending on your financial circumstances, the Student Loans Company may pay some, or all, of it based on an assessment by your LEA (Local Education Authority). For more information on applying to have all or part of your tuition fee paid by the government see the section on Financial Assistance later in this guide.

You should apply to your LEA as soon as possible if you think you may be eligible for support. You will have to pay the difference between the fee and any contribution paid on your behalf. Fees may also be paid by a sponsor, e.g. the armed forces. Part-time UK students are charged a fee per module based on the full-time rate. There are similar arrangements in place for students from the Channel Isles and Isle of Man. These students should contact their government education department. Overseas (non-EU) students pay an overseas fee which you must pay yourself unless you have a sponsor or other funding body.

Full details of the amount due and how to pay will be sent to you before the start of each academic year. It is very important that you read this carefully, follow the guidelines given and keep it for reference. You should also show this documentation to your parents if they are expected to contribute towards your fees. If you have any queries about your fee payment you should ask your college finance officer in the first instance.

Please remember particularly that:

- if you are a full-time student and you withdraw from your programme before 1 December we will not charge you the fee for the year in which you leave. If you leave on or after 1 December you will have to pay the full fee for the year;
- if you are a part-time student and you withdraw during the year you will be charged a fee which reflects the proportion of the year for which you were registered. Note that if you stop attending lectures without formally withdrawing you will be charged for the full period until you cancel your registration;
- if you withdraw from your programme during the year but are given a concession to return the following year to retake the year we will not charge you for both years. You will have to pay the first year's fees before you are allowed to return, but you will not be charged in the year that you do return.

- fees have to be paid while you are on a placement (including a year abroad) as part of your programme. In some cases this may be a reduced fee. If this applies to you and you are unsure of the arrangements, you should ask your college finance officer for details;
- if you owe the University money you will not be allowed to graduate. If your debts remain outstanding for a significant period of time without good reason, you will be required to leave the University without completing your programme of study. You must keep your college informed at all times if you have problems in paying amounts owed to the University;
- help can be given to students with financial hardship – see the section below on Financial Assistance and ask your college for advice;
- we will make an administration charge if you pay your fee late, if you do not notify us promptly of a change in your financial assessment or if we have to process a 'bounced' payment. This reflects the additional work we incur in sorting out these problems.

Travel Insurance

If you undertake a placement as part of your programme of study you will need to take out travel insurance to cover yourself throughout the placement against, among other things, accidents and loss of personal possessions. **This must cover travel, personal accident and personal possessions in all the circumstances of the placement and personal time.** Remember that, in addition, if you wish to engage in a high-risk activity (such as ski-ing or scuba-diving) in your own time while you are on the placement you need to make sure that your insurance will cover this when arranging your policy. (Note that a 'year abroad' counts as a placement.)

Students travelling to an EU country should also take an E111 and/or E128 form as appropriate. This will usually entitle EU citizens to free or reduced cost treatment in EU countries for emergency medical problems.

If you undertake activity associated with your studies in your own time (for example if you collect information for a dissertation while you are on holiday in a relevant location) you will similarly need to take responsibility for your own insurance cover. This applies even if you have had advice from your department about the information you might be looking for.

If you wish to use your own car to travel to a placement or fieldwork site or between the Durham and Stockton campuses or for any similar journey in relation to your programme of study, the insurance for this is your responsibility. You should check with your insurance company to see whether you need to take out additional insurance cover for this. You should also check with your insurance company if you are giving lifts to fellow-students in such a situation.

If you are given a travel grant by the University (e.g. from your college or an expedition fund) to undertake a journey during the vacations, this does not make it a 'university activity' and does **not** give you university travel insurance. **You must take out your own cover for such an activity.**

Any student who fails his/her exams and is asked to withdraw from the University is no longer a registered student. If you are in this position you must not travel to a placement or other activity which was planned in the expectation of passing your exams. **If you are waiting for the result of a resit exam or an appeal you must not travel to a placement or similar activity until and unless you have the result of that resit or appeal and the outcome allows you to continue as a registered student. If you choose to travel in these circumstances you will do so in a private capacity.**

IF IT GOES WRONG... APPEALS AND COMPLAINTS

While we try to ensure that our students all enjoy a happy and successful period of study at Durham we recognise that things can go wrong and we have clear procedures in place to try to resolve issues when necessary. There are two procedures: one for Academic Appeals and the University's Complaints Procedure for Students. The formal statement of the regulations governing appeals and complaints is in volume I of the University Calendar under General Regulation VII, which can be found at <http://www.dur.ac.uk/university.calendar/volumei/regulations/reg7.pdf>

Documentation and advice

Full details of the procedures and the relevant forms are available as follows:

- General Regulations VII: Academic Appeals (in the University Calendar volume I);
- complaints procedure for students;
- proforma for faculty appeals;
- proforma for appeals to the Senate Academic Appeals Committee;
- stage 2 student complaints proforma;
- Code of Practice on Student Complaints and Academic Appeals setting out the entitlements and responsibilities of students who wish to complain or appeal.

You can find these on the web at: <http://www.dur.ac.uk/secretariat.section/index.htm> or obtain hard copies (including copies in large print if required) from:

- reception desk at the University Office, Old Elvet, Durham on 0191 334 6111;
- Student Planning and Assessment Office at Queen's Campus, Stockton on 0191 334 0002;
- the Deans' Offices, Science Site, South Road, Durham;
- DSU Advice Centre, Dunelm House, New Elvet, Durham.

At the end of this guide you will find a flowchart outlining the appeals procedure. Like the guidance notes here they give you an overview of how appeals are investigated but are not meant to be an authoritative guide to appeals. For this you must refer to the appeals regulations and procedures themselves.

Is there anyone who can help me? The Assistant Registrar (Secretariat) in the University Office will provide guidance on the appeals process or complaint regulations on request. You may consult the DSU Advice Centre for help on making your case for an appeal or making a complaint. You should also inform your College if you are appealing and consult your Head of House.

Academic appeals

What is an academic appeal? An academic appeal is a request for a formal review of an academic decision of the University. In practice most undergraduates appeal against a decision of a Board of Examiners or against a Keeping of Term decision.

Is there an informal appeals process? Prior to initiating a formal appeal you might want to discuss your concerns informally with the representative of the Board of Examiners or the officer responsible for making the decision about Keeping of Term.

How do I appeal formally? If you want to lodge a formal appeal **you must act quickly**. Your appeal must be received at the relevant office **within 14 days** of the date of notification of the decision against which you are appealing. You must appeal **using a Faculty Appeals Proforma** and you should obtain a copy of

General Regulation VII Academic Appeals and the Code of Practice on Appeals and Complaints to help you complete the proforma (see documentation list above).

What information do I have to provide on the appeals proforma? The appeals proforma contains detailed guidance notes on the information you should submit. Basically, the proforma asks you to provide information to back up your case for appeal. For example, you will be asked to indicate your own grounds for appeal from the list of valid grounds and you should note that the following factors are **not** grounds for appeal:

- challenging the academic judgements of examiners on an assessment outcome or the level of award recommended or granted;
- claiming that your academic performance was adversely affected by factors such as ill-health, if there is no contemporaneous, independent, medical or other evidence to support your claim or if you failed to disclose this information previously without valid reason;
- claiming that you marginally failed to achieve a higher degree classification;
- claiming that you did not do yourself justice in your assessment.

Where do I send the appeals proforma? You should send the proforma to the Dean's Office for your Faculty. The appeals proforma contains the addresses of the relevant offices.

What happens when you receive my appeal? The appeal is investigated by the Dean or a deputy to the Dean. You will receive written notification of the outcome of your appeal.

If my appeal is turned down by the Faculty, can I appeal anywhere else? You can appeal to the Senate Academic Appeals Committee **within 3 weeks** of notification that your appeal has been turned down. General Regulations VII Academic Appeals (see documentation list above), explains how to do this.

Is there any further opportunity to appeal if my appeal is turned down by the Senate Academic Appeals Committee? You can appeal to the Visitor **within 3 weeks** of notification that your appeal was turned down at Senate level.

Student Complaints Procedure

What is a complaint? Basically a complaint is an expression of dissatisfaction that requires a response.

How does the University try to avoid complaints happening? The University is committed to upholding 'the core values of a civilised, open and inclusive society'. We aim to do this by providing a high quality of service to all our students and by fostering a culture of equal opportunities, fair practice, respect and courtesy.

How do I make a complaint? Our complaints procedures are based on the belief that the majority of complaints can be resolved informally. So, if you have a problem, please discuss the matter first with whoever is directly responsible for providing the service or support. That is:

- if your complaint is about an academic department, you should discuss the problem with the relevant member of staff or with the Head of Department;*
- if your complaint is about a College or Society, you should discuss the problem with your tutor or a College Officer and if you remain dissatisfied, consult the Head of House;*
- if your complaint is about an academic or support service you should discuss the problem with the Head of the Service or his/her Deputy;*
- if your complaint is about general publicity information provided by the University, you should discuss the problem with the Director of Corporate Development and Communications. *

* If your complaint concerns the relevant Head of House, Department or Service or the Director of Corporate Development and Communications, you should obtain a copy of the official complaints procedure and follow stage 2 of that procedure (see documentation list above).

We believe that many problems are due to misunderstandings and that the majority of complaints can be sorted out through this direct, informal approach. If you are unhappy about approaching the relevant person yourself, you can ask a tutor, supervisor or the DSU Advice Centre to approach that person on your behalf.

What should I do if I am still dissatisfied? If the person you approached did not sort out your problem you can pursue your complaint formally, using stage 2 of the complaints procedure. At this stage you would need to complete a complaints proforma (see documentation list above).

If my complaint is turned down at stage 2, what can I do? If you remain dissatisfied, you can go to stage 3 of the complaints procedure and if you remain dissatisfied after you are notified of the outcome of stage 3, you can appeal to the Visitor.

Monitoring of Appeals and Complaints

The University Senate receives an annual report containing an anonymised analysis of formal complaints and appeals by gender, race, ethnic minority group and disability. The data is derived from information you provide to us at registration. If you did not give us this information at registration we might contact you to ask if you would be willing to provide it.

ACADEMIC SERVICES

Library Facilities

The Main Library on the Science Site provides for all subjects taught at Durham except Education, for which there is a separate library at Leazes Road, and Law and Music, which are housed at Palace Green. The Palace Green section is also home to the University's extensive Local Collection and important historic Archives and Special Collections. Programmes at Queen's Campus are provided for there by the library which is part of the Information Resources Centre (IRC) in the Ebsworth Building.

Facilities and services provided by the Library include:

- extensive collections of printed books and journals;
- short loan Reserve collections for reading list items in high demand;
- access to growing collections of networked electronic information resources;
- an online catalogue (OPAC) accessible throughout the University, and beyond, via the WWW;
- borrowing facilities, including self-service facilities for borrowing and returning loans, renewals and checking your borrower record;
- self-service photocopying facilities;
- quiet seating areas for individual study and study rooms for group work;
- long opening hours during term time;
- access to email, word processing and other computing facilities via networked PCs;
- staff to assist with use of library services;
- specialist help with research and finding information.

Extensive information on Library services, facilities and information resources is available on the Web at www.dur.ac.uk/library. A wide range of introductory printed guides and leaflets is provided. Students are strongly encouraged to take advantage of the tours and introductory sessions offered at the start of the academic year.

Formal liaison with the student body is through Durham Students' Union representation on the Library Committee. A termly student users' consultative forum involving student representatives from every

department provides for open discussion of library matters; suggestions from individual students are welcomed at any time.

Computing and Information Technology

The Information Technology Service (ITS) provides the main computing service for the students at the University. New students are automatically registered to use the computing facilities and you will find your username on your campus card which is issued to you when you arrive. Details of how to work out your initial password can be found in the student handbook, Computing at Durham, which you will receive along with your campus card.

There are over 1300 Networked PC Service (NPCS) computers located in classrooms and open access areas around the University - both in Durham and at Queen's Campus, Stockton. The computing service is available 24 hours a day, but access to computers in any particular room depends on the opening hours of the building. The Computer Centre, located on the Science Site, in Durham is open seven days a week, 24 hours a day.

All students at the University have an email account on the ITS system, and it is very important that you check your ITS email account on a regular basis. Most departments and colleges, as well as the Library, the ITS and other sections of the University, communicate with students and staff via email lists. These lists are often generated automatically and external email addresses cannot be added to these lists. The ITS also provides a webmail service, giving easy access to your ITS email account when you are away from the University, by simply using any browser.

The ITS carries out a range of activities to support the use of IT within the University. The list includes:

- provision of a Helpdesk throughout the working day, which may be contacted via personal visits, by telephone and by electronic mail;
- IT training courses for undergraduates (see below);
- support of the University's on-line learning environment, Durham University Online (duo);
- an extensive catalogue of in-house documentation and online information, which includes guides to all our facilities and software, at both at an introductory and a more advanced level;
- sale of PCs, printers, software licences and manuals, floppy disks, zip discs, printer ribbons, and other computing consumables;
- printing facilities - there are laser printers in all ITS classrooms and open access areas;
- provision of a network service to most study bedrooms in all colleges (Ensuite Online).

Help and Information

The ITS Helpdesk provides a single initial point of contact for people who require help or advice concerning all ITS services. You should contact the Helpdesk, for example, for queries related to help and advice on all matters concerning supported software and hardware and copies of in-house documentation, as well as to purchase consumables (such as floppy disks). You can contact the Helpdesk in person, in Durham at the Computer Centre and in the Library Level 2 open access area (term-time only), and in the Information Resource Centre at Queen's Campus, (term-time only); by e-mail (helpdesk@durham.ac.uk), or by telephone 0191 334 1515.

IT Training

A programme of IT training is available if you would like to improve your IT skills either to help with your academic course work or to enhance your future employment prospects.

Responsible use of IT facilities

There are rules and regulations which govern your use of University computing facilities. When you register with the University as a student you bind yourself to abide by these regulations. This means that you can only use the facilities for bona fide academic purposes, and that you must not do anything to affect the integrity of anyone else's work on computer, or any data held on a computer. Your computer username is for your own personal use only. The University rules and regulations governing the use of computing facilities are reprinted in Computing at Durham. It is your responsibility to make sure that you are familiar with the regulations and do nothing to contravene them. (<http://www.dur.ac.uk/its/policy/regulations/>).

Language Centre

The Centre has a popular 'Languages for All' programme with a choice of ten languages for evening or afternoon study from October until just after Easter. In-session Academic English classes are available to International Students. Students who want to take language as part of their degree course can do French, German or Spanish at beginners, post-GCSE, post-A level or level 2 (second year) as a subsidiary module, or BSL (British Sign Language) at Level 1 (beginners), Level 2 and Level 3 provided their main department allows this. The Centre runs full-time and part-time RSA CELTA courses for teaching English as a Foreign Language. Discounted fees are available for Durham University students. The Centre also offers year-round, full-time and part-time tuition in General English and English for Academic Purposes.

The Language Centre open-access facility in Elvet Riverside I (A30/1, ground floor) houses a wide range of audio, video and text-based materials for self-tuition in over 40 languages. The Centre runs its own multimedia PC network, with Key Link Laboratory Software and a 20-channel satellite TV network. Use is free for Durham University students who must agree to the rules of use and deposit Campus Cards on entry. The Centre is open from 11.00 am until 8.00 pm Mondays to Fridays in term time, and approximately a week before and after the beginning of each term, except during the summer vacation when it remains open from 12.00 noon until 6.00 pm (or 7.00 pm depending on summer course organisational requirements) except for the August Bank Holiday.

For further information, contact the Language Centre office in Elvet Riverside (A58) on 0191 334 2230; fax 0191 334 2231 or *email*: languagecentre@durham.ac.uk; alternatively, visit the Language Centre web page at <http://www.dur.ac.uk/languagecentre>

Careers Advisory Service

The Careers Advisory Service provides information and guidance related to careers or postgraduate training, to undergraduate, graduate and postgraduate students. The Service also provides work-related skills training and practical advice, information and guidance on securing jobs or places on courses.

The Careers Advisory Service is situated at 49 New Elvet, adjacent to the Students' Union in Durham and in the Information Resource Centre at Queen's Campus, Stockton. The Information Room provides a wide range of information about options, whether that be employment, further study, taking a gap year etc. All information is on open access to students in the Service. We also offer advice and support to employers and academics.

The Service offers 1-1 interviews, BPS-accredited aptitude testing, computer-based vocational guidance facilities and a comprehensive library and web site. A Job Shop is also available to help students find temporary term-time work in the area.

In their second and final years in particular, all students are encouraged to use the Service and are invited to careers seminars, employability skills workshops, presentations, meetings, short courses and talks arranged throughout the year. All events and vacancies can be viewed on line via the web site. Many people employed in the area, as well as Durham alumni nationally, act as informal consultants about their own work or profession and students are encouraged to make full use of these contacts. The Service also has extensive

links with many employers representing local/regional SMEs (small and medium-size enterprises) and national/multi-national organisations from a diversity of sectors.

Durham University graduates have an excellent employment record and are among the most successful in getting jobs.

For further information: please contact the Careers Advisory Service on 0191 334 1424 at Durham or 0191 334 0202 at Stockton, or see our web pages at www.dur.ac.uk/careers-advice.

RIGHTS AND RESPONSIBILITIES

The University is a community – of students from many different parts of the country and the world, of academic staff, and of other staff – secretaries, porters, cleaners, administrators, technicians and others. The University is also set within the wider communities of the city of Durham and the town of Stockton. It is very important that all members of the University show respect for other members of the communities in which we live and work and in return you have a right to expect similar respect to be shown to you.

Student Discipline

Joining the University means that you agree to observe the Statutes, Regulations and Rules of the University and of its Colleges and Societies which outline the responsible behaviour which we expect of you. We expect you to behave as a good citizen and not bring the University into disrepute. The rules have been drawn up to protect the interests of members of the University and the wider community, and to ensure that unacceptable behaviour will not be tolerated. If you break these rules you can expect to be dealt with under the University's disciplinary procedures. The University has two categories of disciplinary offences: minor offences and major offences. Minor offences are normally handled by the relevant College authorities and penalties can include fines or suspension from College premises. Major offences include action which prevents others from following academic programmes or research, serious damage, disgraceful behaviour, dishonest academic practices including plagiarism, breaches of the Code of Practice on freedom of speech and personal harassment and bringing the University into serious disrepute. Major offences are handled by the Senate Discipline Committee. They are rare but may be punished by suspension from the University or expulsion. In the event of any criminal offence (including an allegation that you have taken any form whatsoever of illegal drugs) the police will be notified irrespective of any disciplinary action which may be taken by the University. The disciplinary regulations are published in the University Calendar (volume I) which can be found at <http://www.dur.ac.uk/university.calendar/> If you are accused of a disciplinary offence you can seek help from either the head of your college/society, your college tutor or the DSU Advice Centre.

Equal Opportunities and Harassment

You have a right to be able to live and study in Durham free from prejudice and harassment because of your age, race, colour, nationality, ethnic or national origin, disability, sexual orientation, gender, marital or parental status, religion, political belief or socio-economic background. The University seeks to promote and maintain an inclusive and supportive work and study environment that respects the dignity of staff and students and assists all members of the University community to achieve their full potential. Full details of the Diversity and Equality Policy may be found on the University's web site (<http://www.dur.ac.uk/diversity.equality/>). The University's policy statement is in the University Calendar (volume I) <http://www.dur.ac.uk/university.calendar/>.

Students and staff have jointly drawn up a policy and code of practice on respect at work and study to discourage harassment of all kinds. The University is committed to providing a working and learning environment that is completely free of personal harassment. The University regards harassment of one member of the University community by another as wholly unacceptable behaviour. If you feel that you are being subjected to harassment in any form, do not feel that it is your fault or that you have to tolerate it. Seek advice or help through a confidential meeting with your College Tutor, Head of House, DSU Student Support Centre staff, Health Centre staff, Personal Harassment Contact or other designated source of help, all of

whom are willing to discuss incidents or problems however large or small they may seem. You may merely seek their advice or ask them to go further and take the matter up on your behalf. Any discussion will be confidential and further action involving you will not normally be taken without your express consent. The policy, including sources of help, is available from <http://www.dur.ac.uk/university.calendar/volume1/codes/cap2.pdf>

Freedom of Speech

It is a fundamental policy of the University as an academic institution that there should be freedom of speech within the law on its property and in its activities. Pursuit of knowledge and the exchange of ideas should be conducted within the University in a tolerant manner and without interference. The University, however, must also take into account other legal obligations: a speaker, for example, who incites an audience to violence or to a breach of the peace or to racial hatred, transgresses the bounds of lawful speech. If you are involved in organising a meeting and have reason to believe that the meeting may be disrupted because of the nature of the speaker, the views of any person attending or the nature of the subject being discussed, or that the personal safety of anyone attending might be at risk because of the nature of the meeting, you must tell the Registrar as soon as possible. The Registrar will then inform you whether the meeting may go ahead. Full details of the University policy on freedom of speech are available in the University Calendar (volume I) <http://www.dur.ac.uk/university.calendar/>. Infringement of the procedures will result in disciplinary action.

HEALTH AND SAFETY

Health and Safety

The University has taken a number of important steps to protect your health and safety. In addition we expect you to take responsibility for yourself. The University Health and Safety Office produces a booklet on student health and safety, which is made available via your College. All new students should receive a copy. If you have a particular concern over health and safety, please contact your College Safety Officer, or get in touch with the University Health and Safety Office on 0191 334 2660 or 0191 334 2667 at Durham or see the Health and Safety Office website <http://www.dur.ac.uk/healthandsafety/>.

Security and Crime Prevention

The University has taken steps to protect your property while you are studying at the University. In addition we expect you to take responsibility for your own possessions. There is always a risk that universities in general are seen as 'soft targets' by thieves and we do rely on the co-operation and common sense of all members of the University to help minimise crime on University premises. In addition to the University's own security team, the University co-operates very closely with Durham Constabulary and Cleveland Police. The Police University Liaison Officer visits each College during the first week of term to give an introductory talk on aspects of personal and physical security. A booklet and leaflet on security and crime prevention is available from your college or the University Facilities Manager on 0191 334 6031 at Durham or 0191 334 0084 at Stockton, or your College.

Living out

All students who 'live-out' in private accommodation should receive a 'Guide to Living Out' pack prepared by the DSU Accommodation Office, but distributed by 'livers-out' representatives (copies are also available at the DSU Accommodation Office). This pack gives advice on house-hunting and all aspects of living out. If you have any doubts at all about any matter of safety in your accommodation please contact the Accommodation Office immediately.

The Environment and the Local Community

Durham and Stockton are relatively small cities / towns so thoughtless behaviour by members of the University is quickly noticed and can lead to serious difficulties which makes life much less pleasant for you and for the

students who come after you. All students are encouraged to develop good relations with their neighbours and other residents in Durham and Stockton. As a minimum you must remember that not all residents appreciate what you may regard as 'typical student behaviour' and that other people have to continue to live and work with local communities during the vacation and after you have left University. In extreme cases the University can regard anti-social behaviour in the local area as a disciplinary matter.

In particular, excessive noise, especially late at night, is very un-neighbourly and can cause great distress, both within college and when living out, particularly to those whose working day starts and finishes earlier than yours or who need an undisturbed night. Do please respect the needs of others, particularly in terraced houses with thin walls, and keep radios, TVs and 'Hi-Fis' at a low volume. If you have a party at your home remember to inform your neighbours and to promise them that it will finish at a reasonable (specified) time, after which they can be assured of peace and quiet.

It is our policy to raise awareness amongst all members of the University about environmental matters. A copy of the Environmental Policy, which has been prepared in co-operation with Durham Students' Union, is available on the web at <http://www.dur.ac.uk/university.calendar/> (Volume I – Codes of Practice and Policies). If you are involved in the promotion of any event (including elections), please take special care to use only designated notice boards and not to litter the University or town. A code of practice on the display of promotional material within the University can be found in the Calendar (volume I) <http://www.dur.ac.uk/university.calendar/> (Codes of Practice and Policies).

If you wish to get positively involved in your local community many groups, such as the volunteers of Student Community Action (SCA), work with local schools, youth groups, elderly people and others. If you would like more details on SCA please contact the SCA Office, Dunelm House on 0191 334 1797.

Transport and Car Parking

The University's General Regulations regarding Motor Vehicles are enforced by a range of measures, including wheel clamping and fines of £30 for a first offence, increasing to £100 for further offences. You must not park in spaces reserved for disabled drivers unless you or your passenger is the holder of a permit for people with disabilities.

A Code of Practice for the use of group transport being driven by members of the University is available in the University Calendar (volume I, General Regulations) – on the web at <http://www.dur.ac.uk/university.calendar/> - and should be read before any student uses a mini-bus or similar vehicle to transport other students or tows a trailer to transport equipment.

Durham City

Immense problems arise from the parking of cars belonging to students and other visitors to the City. All parts of the University are within easy walking distance of each other and there is not a general need to use a car to get around the colleges and departments: in fact, it will almost certainly be quicker to walk or cycle than find somewhere to park. Serious consideration should be given, therefore, to whether you need to bring a vehicle to Durham. First-year undergraduate students are not normally entitled to a university car parking permit. Special arrangements can be made, however, for disabled students who bring a car to Durham: details are available from your college office.

The General Regulations of the University require all students bringing a motor vehicle to Durham to register it with the University. Registration is only given on receipt of proof that you have satisfactory arrangements for garaging or parking the vehicle overnight: particular attention is given to ensuring that such parking does not inconvenience neighbours and local residents. The University is unable to provide any parking for students adjacent to academic departments, and the colleges have only limited parking facilities. Durham County Council currently charges for residential car parking within Durham City Centre, and at the time of going to

press, the University is consulting on the introduction of charges for parking permits for both staff and students.

Queen's Campus, Stockton

Students wishing to park a motor vehicle on the Queen's Campus must apply for a parking permit. Permits to park in the college residences do not entitle you to park elsewhere on the campus. All vehicles are driven and parked on the campus at the owner's risk: the University accepts no responsibility for loss or damage to vehicles or personal property. Vehicles may be parked within designated parking areas only and no vehicles may be left overnight (except at the college residences for residents only). The speed limit on the campus is 10 mph. At the time of going to press, the University is consulting on the introduction of charges for parking permits for both staff and students.

There are cycle racks near the main entrances to the Ebsworth and Holliday Buildings and cycle sheds at the college residences. Students who are not living in college may park cycles in the sheds belonging to George Stephenson College (keys obtainable from the main campus administration office on payment of a returnable deposit of £10). Like cars, cycles are ridden and parked on the campus at the owner's risk. Cycles may not be taken into the buildings. Motor vehicles and cycles must not be parked so as to create a hazard, obstruct other vehicles or pedestrians or access to buildings. Where a vehicle is parked so as to create a safety hazard the University reserves the right to inform the police.

Transport between Durham and Queen's Campus

A subsidised bus service is available to students of the University, giving free travel to students and staff between designated stops in Durham and at the Queen's Campus, Stockton. Details are available on the University website at <http://www.dur.ac.uk/Stockton/carshare/udscbus.htm>. You must have identification such as a campus card or NUS card. Discounted travel is also available and tickets can be bought on the bus or in advance from the John Snow and George Stephenson JCRs and DSU.

FINANCIAL SUPPORT

Please note that this information is correct at the time of printing for 2004/05. However information on student support can change from time to time so you must get up-to-date information from our website at <http://www.dur.ac.uk/student.support/>. If you have any queries about any of the information on the website you should in the first instance contact Mrs Elizabeth Lovett, Admissions Adviser (Student Financial Support), extn. 334 6116 or e.l.lovett@durham.ac.uk.

The main costs that you will face as a student are tuition fees and living costs. You may also wish to participate in clubs and societies, to travel in order to broaden your academic and personal interests, to take part in sporting, musical or dramatic activities or to undertake charity work. It is possible, depending on your financial circumstances, to receive help towards all these costs. The money you require will come from a variety of sources and will, together, provide you with a package of support sufficient to complete your studies. The main source of funding available to you, in addition to parental contributions, will be your student loan but this may be supplemented with assistance from other funds. The following few paragraphs explain the student support system in more detail. Further information is available through the Student Financial Support Website and from your College.

Support from the Government (Statutory Support)

A summary of the statutory support available to students in the UK is available at <http://www.dfes.gov.uk/student-support/>.

Tuition Fees

All home and EU fee-paying students are entitled to apply to the government for assistance towards the cost of their tuition fees (£1,150 for 2004-05). Depending on a student's family income all, part or none of their tuition fees are paid directly to their University. For more information on income levels and tuition fee payments see <http://www.dur.ac.uk/student-support/prospective/income.htm>.

All new entrants to the University in October 2004 should already have applied to their Local Education Authority (in England and Wales), the Student Awards Agency for Scotland (in Scotland), the relevant Education and Library Board (in Northern Ireland) or the Department for Education and Skills EU Team (students from the European Community) for assistance towards the cost of their tuition fees. If you have not you should contact the relevant body **immediately**:

- for Local Education Authority contact details see <http://www.dfes.gov.uk/leagateway/index.cfm?action=address.default>
- for further details on the Student Awards Agency for Scotland see <http://www.student-support-saas.gov.uk/>
- for Education and Library Board contact details see <http://www.student-support.org.uk/contact/contact.asp>
- for the contact details of the Department for Education and Skills EU Team see http://www.dfes.gov.uk/student-support/eustudents/more_more_informatio.shtml

Student Loans

All home fee-paying students – but **not** EU students – may borrow from the government towards the cost of their living costs and programme costs while at university. All new entrants to the University in October 2004 should already have applied for their Student Loans. If you have not you should contact the relevant body **immediately**. You cannot receive your Student Loan until you have registered with the University (see the section on Registration earlier in this booklet) and if you register late for Level 2 or 3 (or where applicable, 4) you will not receive your Student Loan at the start of the next academic year. **Remember that you must register in order to receive your student loan.**

Support for Students with Children and Students with Disabilities

The Government provides extra financial support for students with children and students with disabilities. Depending on their financial circumstances student parents may be entitled to a Parents' Learning Allowance of £1,330, a Childcare Grant covering 85% of the cost of childcare provision from a registered childminder, Child Benefit of £16.50 per week for a first child and £11.05 per week for subsequent children. All parents with an income lower than £58,000 are eligible to receive Child Tax Credit from the Inland Revenue.

Students with disabilities may be eligible to receive a Disabled Students' Allowance (DSA). Depending on individual students' needs this includes specialist equipment to the value of £4,565 for the entire programme of study, a non-medical helpers' allowance of up to £11,550 for full-time students, help towards the additional costs of travelling to your institution and a general allowance.

Students with disabilities may be eligible to receive a Disabled Students' Allowance (DSA). Depending on individual students' needs this includes specialist equipment to the value of £4,565 for the entire programme of study, a non-medical helpers' allowance of up to £11,550 for full-time students, help towards the additional costs of travelling to your institution and a general allowance.

- For information on financial support for students with children (not just lone parents) see http://www.dfes.gov.uk/student-support/students/lone_parents.shtml
- For information on applying for Child Tax Credit see <https://www.taxcredits.inlandrevenue.gov.uk/HomeIR.aspx>
- For information on financial support for students with disabilities see http://www.dfes.gov.uk/student-support/students/stu_students_with_d.shtml

Support from the University (Discretionary Support)

All students experiencing financial difficulties whilst at University may apply for financial assistance. This support is paid in the form of grants which are given at the University's discretion, hence 'discretionary support'.

The Access to Learning Fund (previously known as the HEFCE Hardship Fund)

The government provides every University in the UK with a sum of money to spend on home fee-paying students experiencing financial hardship each year. This is called the Access to Learning Fund. If you are a home fee-paying student and find yourself in unexpected financial difficulty at any time during your time at University you can apply for a grant or a loan from the Access to Learning Fund. The application process is thorough and you will have to provide detailed information on your income and expenditure, three months' bank statements and a comprehensive personal statement. Your application will be assessed by staff in your College and will be treated strictly but fairly and in the utmost confidence. Awards depend on circumstances but students can be awarded up to £3,500 per academic year (although awards of this size are rare). For more information on how to apply for a grant or a loan from the Access to Learning Fund see <http://www.dur.ac.uk/student.support/>. To apply contact the Senior Tutor or Student Support Officer in your College or Student Services at Queen's Campus. You may also contact the DSU Advice Centre. Contact details are available at <http://www.dur.ac.uk/student.support/current/contacts.htm>

The University Hardship Fund

The University is also able to provide limited support to overseas fee-paying students experiencing financial hardship. These students may apply for a grant or a loan from the University Hardship Fund. If you are an overseas fee-paying student and find yourself in unexpected financial difficulty at any time during your time at University you can apply for a grant or a loan from the University Hardship Fund. The application process is thorough and you will have to provide detailed information on your income and expenditure, three months' bank statements and a comprehensive personal statement. Your application will be assessed by staff in your College and will be treated strictly but fairly and in the utmost confidence. Awards depend on circumstances and you should be aware that funds are only available to students who had a sound financial plan in place before their studies started and who are facing hardship because of circumstances beyond their control. For more information on how to apply for a grant or a loan from the University Hardship Fund see <http://www.dur.ac.uk/student.support/>. To apply contact the Senior Tutor or Student Support Officer in your College or Student Services at the Queen's Campus. You may also contact the DSU Advice Centre. Contact details are available at <http://www.dur.ac.uk/student.support/current/contacts.htm>

Personal Development Award Funding

Through the generosity of alumni of the University, who regularly donate money to the University, we are able to support a small number of students each year who want to further their personal development through extra-curricular activities but who are prevented from doing this by their financial circumstances. For more information see <http://www.dur.ac.uk/student.support/current/personaldevelopmentawards.htm>.

STUDENT ORGANISATIONS AND SUPPORT SERVICES

Please note that these details are correct at the time of going to press for the academic year 2004/05. You should check details for later years using the contact information supplied.

Telephone numbers are given in full. All university numbers begin 0191 334... If you are telephoning from an internal university phone you need only dial 4 followed by the final four digits. So if the full number is 0191 334 6111, the number from an internal phone is 46111.

To dial an external number from an internal phone you need to dial 9 followed by the full number.

Academic Support

Faculty of Arts and Humanities

Dean Mr A J Heesom
Deputy Dean Dr C G Crowder
Dean's Office, South Lodge, Science Laboratories, South Road, Durham, DH1 3LE
Contact telephone number: 0191 334 2904

Faculty of Science

Dean Dr K J Orford
Deputy Dean Dr M J Eacott
Sub-Dean Dr D J Robson
Office of the Dean of Science, Dawson Building, Science Laboratories, South Road, Durham, DH1 3LE
Contact telephone number: 0191 334 1017 (Dean, Deputy Dean); 0191 334 1014 (Sub-Dean)

Faculty of Social Sciences and Health

Dean Prof R J Allison
Deputy Dean tbc
Dean's Office, South Lodge, Science Laboratories, South Road, Durham, DH1 3LE
Contact telephone number: 0191 334 2904

Combined Honours in Arts and Social Sciences

Director Prof R D Smith
Combined Honours Office, Elvet Riverside 2, New Elvet, Durham, DH1 3JT
Contact telephone number: 0191 334 1016

Natural Sciences

Sub-Dean of the Faculty of Science Dr D J Robson
Office of the Dean of Science, Dawson Building, Science Laboratories, South Road, Durham, DH1 3LE
Contact telephone number: 0191 334 1014

University Office

Reception, University Office, Old Elvet, Durham, DH1 3HP
Contact telephone number: 0191 334 6111

Medical Care

You are strongly advised to register with one of the medical practices with which the University has close contact, details of which are given below. However you may wish to register with another practice in Durham or Stockton, especially if you live locally and wish to remain registered with your 'home' GP. In this case please make sure that your college knows which practice you are registered with.

Durham

Most students in Durham city are registered with the Claypath Medical Group located at 42 Old Elvet. The same GP practice also has a surgery at 26 Gilesgate. The term-time surgery opening hours (which are not necessarily the same as appointment hours) for the Old Elvet practice are as follows:

- ◆ Monday – Friday 8.30 am – 5.00 pm;
- ◆ on Saturday mornings, patients can be seen at Claypath and University Medical Group;
- ◆ closed on Sundays;
- ◆ please note that the Old Elvet and Claypath Surgeries are closed for staff training on Tuesday 12 noon – 1.00 pm each week.

During the summer vacation, there are surgeries from 8.30 - 11.00 am Monday to Friday only, although full medical facilities and surgeries are available all day at the practice at 26 Gilesgate, Durham.

For further information: please visit the surgery or phone 0191 386 5081 (Old Elvet) or 0191 374 6888 (Claypath).

Queen's Campus

At Queen's Campus we have an arrangement with the Alma Medical Centre to provide health care for students. Every week during term-time a doctor from this practice comes onto the campus for appointments with students. Standard times are:

- ◆ Tuesdays, Wednesdays, Fridays 1.00 pm - 2.00 pm
in Room A08 on the ground floor of the Holliday Building.

Outside these times you can make an appointment to visit the surgery which is located at Alma Medical Centre, Nolan Place, Stockton-on-Tees, TS18 2AJ. Tel: 01642 607248.

Durham University Service for Students with Disabilities (DUSSD)

DUSSD can provide information, advice and assistance to any students whose studies are affected by a disability, including specific learning difficulties, or a medical or mental health condition. We are located in Durham at Pelaw House, Leazes Road, near the School of Education and the College of St Hild and St Bede, and in Queen's Campus in the Student Services area on the ground floor of the Holliday Building.

For further information:

- at Durham please contact the Director and Senior Adviser, Dr Margaret Collins, Tel (+minicom): 0191 334 8115, email: Margaret.Collins@durham.ac.uk
- at Queen's Campus: Mrs Jenny Barker, Adviser, on 0191 334 0093.

University Counselling Service

Free and confidential counselling is provided by a team of professional counsellors, to help students of all years with personal and emotional difficulties, particularly when the problems affect your studies. This Service is located on the top floor of Elvet Riverside in Durham (open 9.00 am - 12.00 noon and 1.00 pm - 4.30 pm) and in the Student Services Centre at Queen's Campus. Call in, telephone or email to make an appointment.

For further information:

- on the Durham campus please contact the Secretary, Gail Rayner on 0191 334 2200; or email on www.dur.ac.uk/~dcn0www1/.
- at Queen's campus please contact Mary O'Halloran on 0191 334 0090;
- the e-mail address for the Service is Counsel.Service@durham.ac.uk.

Nightline

Nightline is a confidential, anonymous listening service, run by Durham students and is open every night of the term from 9.00 pm - 7.00 am. People can call for all sorts of reasons... you can phone if you are having a hard time or if you simply want a chat... you can drop in if you prefer to talk to someone face to face. You can also drop in for free condoms or to borrow a rape alarm and we can get you a taxi if you are out alone at night. We offer a free, anonymous pregnancy testing service and we have information on everything from the nearest counselling service to the best place to get a pizza. Everything is confidential and completely anonymous. There is a man and a woman on duty each night. We have no religious or political affiliation, and we are not here to judge you or push you into making a decision. We are here to listen. We will never turn you away. You'll find us on Old Elvet, behind the Dun Cow pub.

For further information about Nightline or to join the organisation log onto our website at www.dur.ac.uk/night.line/, or use the phone number on the back of your Campus Card.

DSU Advice Centre

The Advice Centre offers free, confidential, independent and impartial advice and information should you have any problems while studying at Durham. We have two full-time advisors who are available all year round; we are also at Queen's Campus one day a week - contact student services in the Holliday Building for details. We offer advice and information on a wide range of issues such as financial, housing, academic, legal, consumer and personal. You can call us on 0191 334 1775 or drop in to see us on Level A in Dunelm House.

DSU Accommodation Office

The DSU Accommodation Office provides a free service to all students and staff wishing to live in private rented accommodation. We also work at Queen's Campus, Stockton. Appointments can be made by contacting Mary O'Hallaran on 0191 334 0090.

Living out: all students who 'live-out' in private accommodation should receive a 'Guide to Living Out' pack prepared by the DSU Accommodation Office, but distributed by 'livers-out' representatives (copies are also available at the DSU Accommodation Office). This pack gives advice on house-hunting and all aspects of the living out. If you have any doubts at all about any matter of safety in your accommodation please contact the Accommodation Office immediately. In addition, if you encounter problems whilst living in private rented accommodation the Accommodation Office can offer advice and assistance.

For further information: please contact the Accommodation Office on 0191 334 1770 or call into the Office on Level A, Dunelm House.

Child Care

The Nursery at Durham has 85 places for children from two months to school age. Care is provided by qualified and experienced staff. The Nursery is open from 8.00 am - 6.00 pm Monday to Friday throughout the year. It closes only when the University is closed at Christmas, Easter and Bank Holidays. The Nursery is registered as a Nursery education provider with OFSTED. DFES-subsidised places will be available for three- and four-year-old children.

For further information: about Nursery places and costs please contact Jill Johnston, Officer in Charge, The University Day Nurses, Haworth Building, Leazes Road, Durham DH1 1TA; 0191 334 8153.

A **holiday play scheme** for school children up to 13 years old is available at Durham Sixth Form Centre in Durham City. The play scheme operates from 8.00 am - 6.00 pm on most school holidays except Bank Holidays.

For further information: contact Sarah Brown, Secretary, Personnel Office, Old Elvet, Durham 0191 334 6511 or Kathryn Larkin-Bramley, Business Manager, The University Day Nurses, Howarth Building, Leazes Road, Durham, DH1 1TA; 0191 334 8157.

The **pre-school playgroup** is located at 128 Elvet Waterside and is situated at the rear of Durham City swimming pool. Sessions are run by qualified staff every morning and Tuesday and Thursday afternoons for a total of 75 children. Each group caters for 25 children from two-and-a-half years up to 5 years old. Group 1 meets on Monday, Wednesday and Friday mornings; Group 2 meets on Tuesday and Thursday mornings and Group 3 meets on Tuesday and Thursday afternoons - each session lasting for 2.5 hours. Priority is given to University staff and students. The playgroup is part of the Early Years Development and Childcare Partnership and, as such, is OFSTED inspected. Funding is therefore currently available for three-and-four year-olds with the possibility of funding for younger children if required. In addition, a drop-in **Parent and**

Toddler group is held on Monday, Wednesday and Friday afternoons from 1.00 pm - 3.00 pm for children from birth to five years.

Further information can be obtained on 0191 386 1606.

Childcare Funding, Grants and Information

A brief guide to the support available to students with dependant children is available in the Financial Assistance section of this guide. It is general and does not cover the complex rules for entitlement. For further specific advice and information please contact DSU Advice Centre, the Inland Revenue, local Tax Office and/or Local Education Authority.

Durham County Council also provides a service and helpline for anyone seeking information on registered and approved childcare in the county. The Childcare Information Service can be contacted on 0845 602 4469.

There may also be educational trusts and charities that you can apply to for discretionary funding, such as the Elizabeth Nuffield Trust. For further information please contact DSU Advice Centre on level A in Dunelm House or call us on 0191 334 1775.

Religion

Most colleges have their own chaplain, the majority of whom are **Anglican**. You can obtain further details, including contact details for the chaplains, from your college.

All chaplains will be able to provide you with a list of places of worship in the Durham and Stockton areas. This information will also be available on the DSU website (under Welfare) and in college offices.

The **Roman Catholic** Chaplain for the University is Father Peter Leighton (0191 384 3442); email peter.leighton@durham.ac.uk. There is a Catholic Society in Durham. Visit the web site for information: <http://www.grove21.com/jt/cathsoc/documents/index.php>.

There is an **Islamic Society** in Durham and two Mosques are available for prayer in the city, one behind Old Elvet and the other in the Gillesgate area of the city. Visit the Society's web site for information: <http://www.dur.ac.uk/islamic.society/>.

There is also a **Jewish Society** in Durham that has forged strong links with the local community. Visit the Society's web site for information: <http://www.dur.ac.uk/jewish.society/>.

International Students

As an international student you will have a unique perspective on life in Durham. If you have any concerns during your stay, no matter how small, the University has an International Student Support Service which is here to help you make the most of your academic and social life in Durham. They also offer information and advice on visas and immigration law. The International Students' Association arranges a programme of social and cultural events each term.

For further information: please contact the International Student Co-ordinator, Duncan Myers at the International Student Service, University Office, Old Elvet, Durham on 0191 334 6329, e-mail: d.f.myers@durham.ac.uk or international.office@durham.ac.uk. At the Queen's Campus, the International Officer has special responsibility for international students on 0191 334 0046.

Sports Facilities

Durham is one of Britain's premier sporting universities and has a sports strategy based on the three areas of participation, performance and community. With over 2000 students rowing on a regular basis each year and 70 men's and women's soccer teams, the University boasts a participation level that can be matched by few others. Durham's high performance record is well known through former students such as Jonathan Edwards, Will Carling and Nasser Hussain. This performance strategy has been significantly developed over recent years with considerably improved coaching and fitness support, as well as improved sporting facilities. Recent improvements in facilities include the new fitness gym and high performance training area, a new athletics track, a resurfaced netball and tennis facility and a world-class water-based hockey pitch. Our community provision and support, through such projects as Durham Sport, Durham Sporting Club and Durham University Aquatics, has been described by the Minister for Sport as 'the best model of its kind in the country'.

For further information: please contact Durham University Athletic Union on 0191 334 1699 or Graham Sports Centre on 0191 334 2178 or visit the website: www.dur.ac.uk/DUAU/.

Student Organisations

The liveliness of the University community is reflected in the many and varied activities provided for and by students. Many of these activities are organised by student societies and organisations under the aegis of Durham Students' Union, Athletic Union or College Junior Common Rooms (JCRs). Others are private enterprise functions organised by individual students. Students are not allowed to use the title Durham University or University of Durham without written approval, unless they are engaged on official business of a recognised student organisation. A full list of societies, religious and non-religious, ratified by the Durham Students' Union can be found at <http://www.dsu.org.uk/societies/list.php>.

Membership of Durham Students' Union and Durham University Athletics Union (DUAU) is open to all full-time students, although to participate in sport there is now a one-off charge of £60 to £80. All Colleges and Societies have their own student organisations, normally called Junior Common Rooms (JCRs). As required by the 1994 Education Act, the University has prepared a Code of Practice for DSU, DUAU and JCRs. The Code has been sent to all these organisations and is also available on request from University Office, Old Elvet, Durham. The Code contains information on the restrictions imposed by the law on charities, political activities and campaigns of student organisations. It also provides information on the right of any student to opt out of membership of any student organisation and about the services which will still be provided to students who opt out.

DSU Fund-raising Activities

Durham University Charities Committee (DUCK) is Durham's equivalent of RAG (Raise and Give), a national student organisation which raises money throughout the academic year. This money is then distributed to local charities and groups as well as national and international charities. Each year DUCK has a full programme of fundraising activities, ranging from 'rag raids' to sponsored hitch-hikes and bungee-jumps, with something happening most weekends. There is also the annual and infamous DUCK Week, held in early February - a week where fantastic fundraising takes place in each college as they battle to see which one can raise the most per student.

For more information come into the DUCK Office, Level A, Dunelm House and talk to our Sabbatical Manager, currently Jennie Bradbury; alternatively phone us on 0191 334 1797, e-mail DUCK.charities@dur.ac.uk or visit our website <http://www.durham.ac.uk/duck/>.

Student Community Action (SCA)

Student Community Action (SCA) provides students with the opportunity to put their talents to use within the community. We aim to match talents and skills with need in the community so that the projects are a two-way process. Our volunteers are a diverse bunch with over 700 registered volunteers who help make the 30+

projects we run a huge success. The links with the community are important as they help break down barriers between students and residents, usually with rewarding consequences.

SCA is not just about hard work; volunteers are never expected to give more time than they can, and as projects run at all different times they can be fitted in with lectures and socialising. In exchange, you will gain great experience, build your CV and make new friends. There are also opportunities to get involved in the decision-making and running of the projects so that you can gain more skills.

We also run the Millennium Volunteers Programme which offers you the chance to gain a nationally recognised award for your volunteering - if you think you can complete 100 - 200 hours of volunteering while you are at the University, it's a great asset to your CV!

We offer a very diverse range of projects, so there will be something for everyone and it won't cost you a penny. Also, if you've an idea of a project you'd like to run, let us know and we'll make plans to set up something to meet your needs. So, if you have read this far and have lots of enthusiasm, a little patience, a good sense of humour and a couple of spare hours, then SCA could well be for you. Members join for numerous reasons, but whatever your motivation, feel free to pop into the office to find out more: Level A, Dunelm House, Chair: Alastair McCabe, Manager: Amy Herd, telephone: 0191 334 1797, email: community.action@durham.ac.uk, web page: <http://www.dur.ac.uk/community.action>

Emergency telephone numbers (see note on telephone numbers, p22)

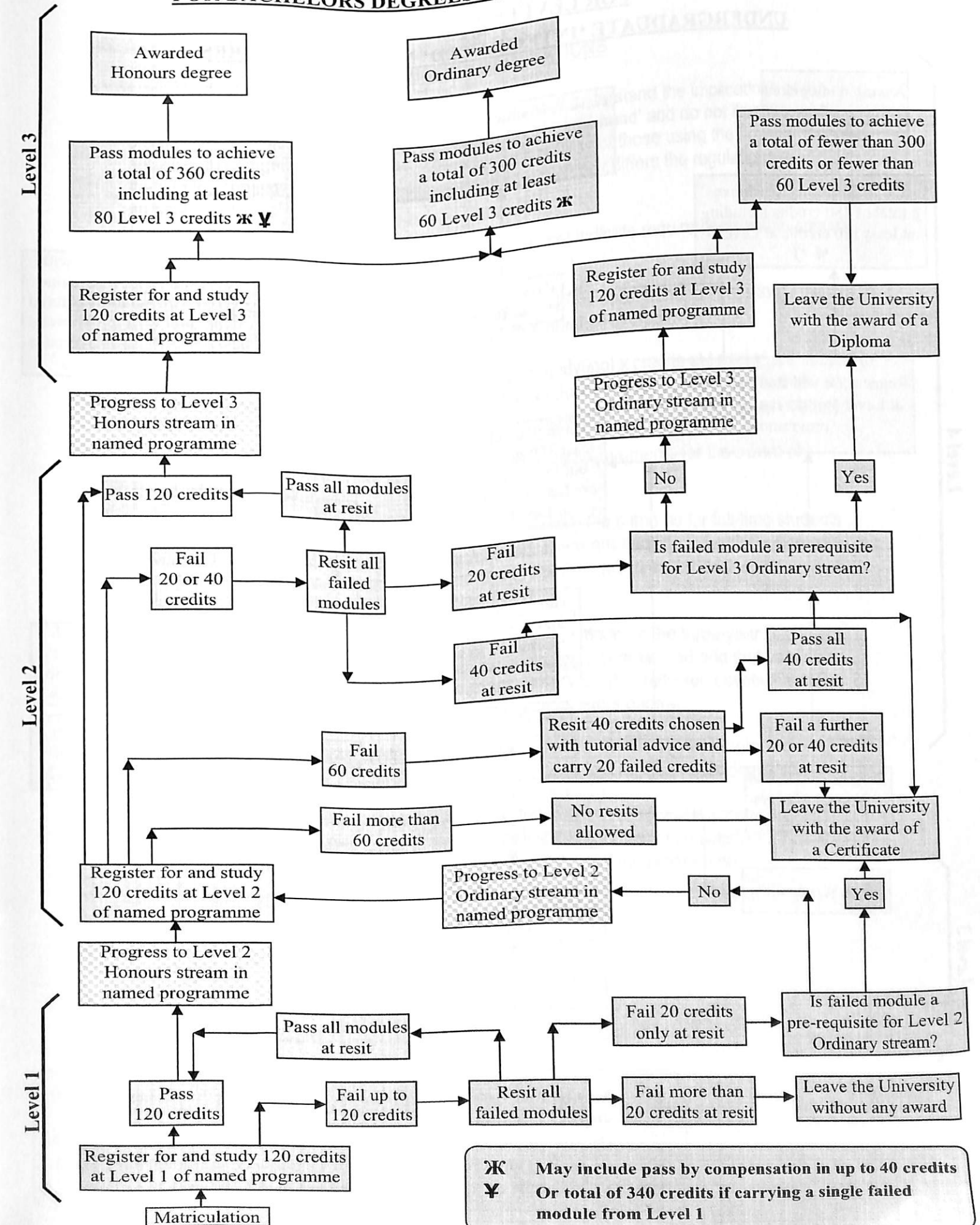
Durham

Fire, Police, Ambulance, emergency	999
University emergency (24 hours)	0191 334 3333
University Security Office (24 hours)	0191 334 2222
Durham Police	0191 386 4222

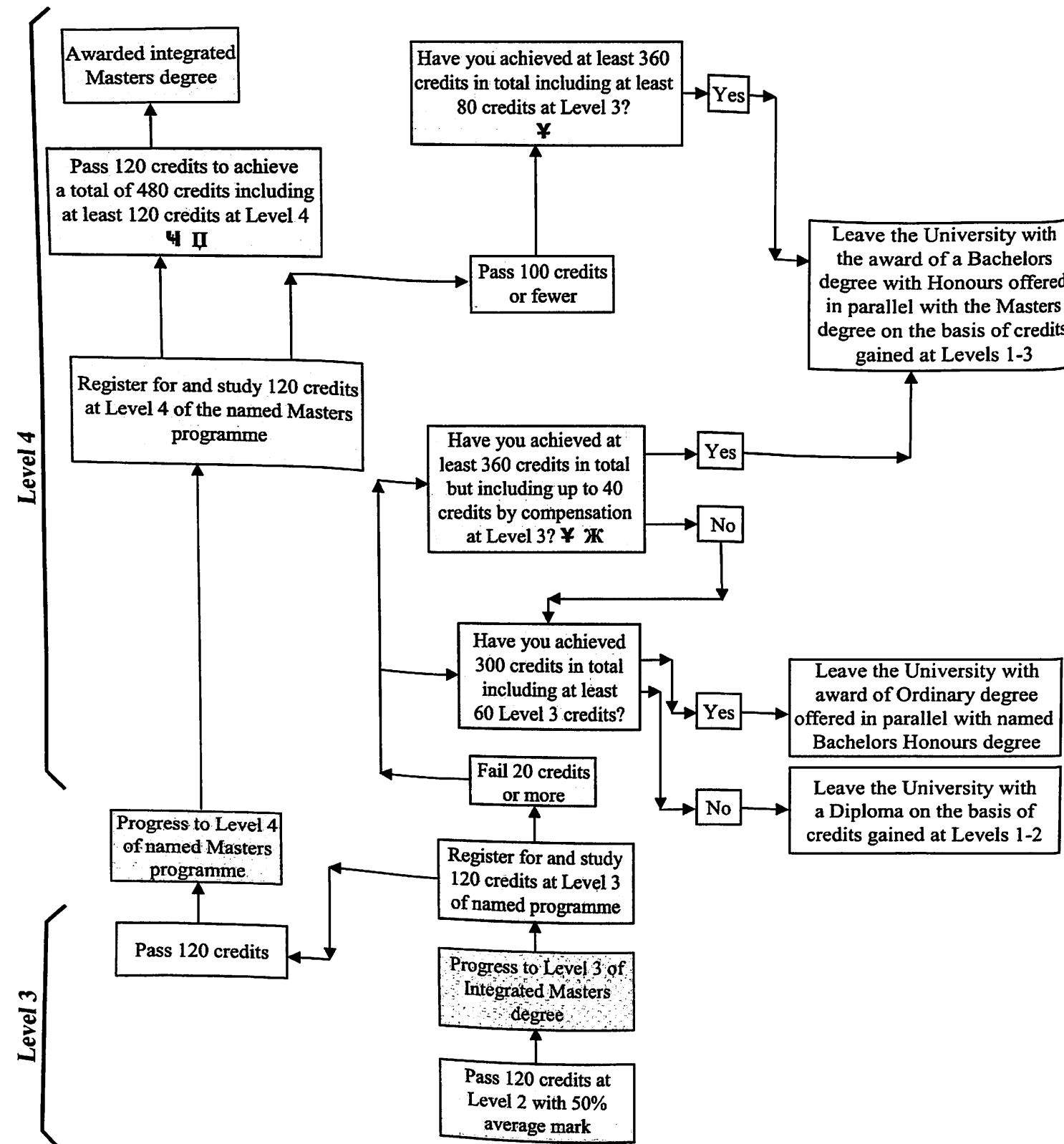
Queen's Campus

Fire, Police, Ambulance, emergency	999
Queen's Campus Security (24 hours, Holliday Building)	0191 334 0080
Queen's Campus Security (Ebsworth Building)	0191 334 0081
University Security (Emergency, 24 hours) Internal	0191 334 3333
Stockton Police	01642 607114

FLOWCHART OF PROGRESSION REGULATIONS FOR BACHELORS DEGREES / DIPLOMAS / CERTIFICATES



**FLOWCHART OF PROGRESSION REGULATIONS
FOR LEVELS 3 AND 4 OF
UNDERGRADUATE 'INTEGRATED' MASTERS DEGREES**



Ж May include pass by compensation in up to 40 credits as per Bachelors degree regulations
 ¥ Or total of 340 credits if carrying a single failed module from Level 1
 4 Or total of 460 credits if carrying a single failed module from Level 1
 II No passes by compensation allowed at Level 3 or Level 4

**NOTES TO ACCOMPANY FLOWCHARTS
OF
PROGRESSION REGULATIONS**

1. These flowcharts are intended to help students and staff understand the implications of the progression regulations. Inevitably they use a form of 'short-hand' and do not illustrate all the details of the progression regulations. It is the responsibility of those using the flowcharts to use them in the context of the full regulations. Where terminology differs the regulations are authoritative.
2. The flowcharts illustrate the core regulations: they do not indicate requirements within specific programmes.
3. The flowcharts refer to 'pass[ing] / fail[ing] x credits'. This is short-hand for 'pass[ing] / fail[ing] modules to the value of x credits in order to gain that number of credits'.
4. References in the flowcharts to 'register[ing] for and study[ing] x credits at Level y' are subject to the core and programme regulations regarding the modules which may be taken at that Level, including the provision to take modules from an adjacent (lower) Level at any Level of study.
5. The flowchart for the Bachelors degrees covers also the requirements for the award of Certificates and Diplomas.
6. Progression regulations for part-time students are exactly the same as for full-time students except that they take 2 or 3 years over each Level. There are additional regulations to cover the progression of part-time students from one year to the next within each Level which are not reflected in the flowcharts.
7. The flowchart for the Bachelors degrees is based on the model of the three-year Bachelors programme. Four-year Bachelors programmes including a year abroad add that year as a progression requirement between the Levels as appropriate (i.e. between Levels 1 and 2 or 2 and 3). They do not follow the model of the four-year Masters degree.
8. The flowchart for the undergraduate or integrated Masters degree shows progression from the end of Level 2 only. For Levels 1 and 2 refer to the flowchart for Bachelors degrees.
9. Students taking a programme which includes a Foundation Year (Level 0) matriculate on progression from Level 0 to Level 1. This progression is conditional on satisfactory completion of the Foundation Year in accordance with the regulations of the programme.

UNIVERSITY OF DURHAM

DATA PROTECTION AND THE UNIVERSITY'S USE OF PERSONAL INFORMATION

1. It is necessary for the University to hold information on current, past and potential students and employees. This information is used for administrative purposes including registration with the IT Service, Library services, allocation of accommodation, and financial payments. Personal data is also held to enable the University to remain in contact with its Alumni and past employees and for fund raising and marketing purposes. In addition, the University collects and holds data collected via closed circuit television for security purposes.
2. Your registration with or employment by the University is a matter of public record. The University publishes the name and college of individuals awarded a qualification. Members of staff have their names published in the University Calendar and/or telephone directory. Student's names are often included in lists posted in departments or Colleges. Registration with the IT Service also means that your name, College, computer user name and electronic mail address will appear in the University's directory which can be accessed from within the University and from anywhere on the world wide computer network. In exceptional circumstances individuals can opt-out of the electronic mail directory.
3. Information on individuals may be disclosed outside the University either at an individual's request or in furtherance of an individual's interest e.g. confirmation for the Student Loan Company that an individual is still in attendance in order that he/she can receive his/her Student Loan. The University is required to make returns on individuals to the Higher Education Statistics Agency. It will also on occasions make available personal information to other agencies, including government agencies and by law to provide certain information to Council Tax Registration Officers in accordance with the terms of the 1992 Act. The University may disclose data to other selected Alumni acting for the University. The University may disclose data to organisations for market research purposes.
4. The University may disclose data for the purposes of the detection of fraud, particularly in relation to the detection and prevention of plagiarism.
5. If your course of study or employment with the University requires a period of study or employment abroad, it will be necessary for the University to transfer personal data to the overseas University or employer. Likewise, specific personal data pertaining to students or staff required to undertake professional placements as an integral part of their programme of study or employment will be transferred to the organisation(s) in which they are placed. In both cases, this may require the transfer of personal data outside the European Economic Area.
6. All personal data processed pertaining to students studying the MB,BS Phase I at the University of Durham will be transferred to the University of Newcastle upon transfer to Phase II. In addition, personal data, such as examination marks, allegations of professional misconduct and student status, will be copied to the University of Newcastle annually for their records. Following transfer to the University of Newcastle for Phase II of the programme, student records will be retained for historical and statistical purposes and to enable staff at the University of Durham to provide feedback and references for past students should they be requested. The information will also be retained for development and alumni purposes.
7. The University may occasionally commission photographs around the campuses or at specific University events, such as the matriculation ceremony or Congregation, which could include images of students or staff, for inclusion in its promotional material.
8. The University may distribute promotional material from another organisation which it believes may be of interest to recipients. The University does, in certain limited circumstances, pass on information about individuals who owe the University money to an external debt collection agency if it has been unable to recover the debt by the normal internal process.
9. The University routinely logs information about use of IT facilities. This information is used for statistical purposes and is an inherent part of effective systems operations. The University may also monitor electronic communications to ensure that these systems are being used in accordance with the University's Regulations (see Policy and Regulations for the use of University IT Facilities set out in the University Calendar), and specifically to prevent or detect crime. All activities comply with the Data Protection Act 1998 and the Regulations of Investigatory Powers (RIP) Act 2000.
10. Personal data on staff and students are provided by the individual himself/herself normally by an application form supplemented by additional information at registration or a similar process. The University will also add additional information following the conditions specified in its Data Protection Notification.
11. The University is required to obtain information about past criminal convictions as a condition of employment or prior to offering a place on some of its programmes.
12. Information on an individual's health may be required as a condition of employment, admission to certain programmes of study or for purposes linked with academic progress. The University may, in exceptional circumstances, contact third parties, such as medical professionals or next of kin, concerning the health of its staff or students when it believes it is reasonable and/or in the best interests of the staff member or student to do so.
13. Certain information on individuals as defined in the 1984 and 1998 Data Protection Acts is regarded as particularly sensitive data. This includes race and ethnic origin and physical or mental health. The University does hold such information on its staff and students but it is used for equal opportunities monitoring or for the provision of specific services to individuals. For example:-
 - u Administering Sick Pay and Sick Leave Schemes
 - u Managing the absence control policy
 - u Checking suitability and fitness for work
 - u Checking suitability and fitness for course places or continuation of study
 - u Administering Maternity Leave and pay schemes
 - u Managing and maintaining a safe environment
 - u Managing duties and obligations under the Disability Discrimination Act
 - u Provision of pastoral support
14. The University has a comprehensive notification with the Information Commissioner. Details of its notification can be ascertained from the Information Commissioner's web site at:

<http://forms.informationcommissioner.gov.uk/search.html>.
15. It is a requirement of all students and staff when using or compiling personal data in the University or using data obtained via the University that all such data and the use of such data held in relevant filing systems must confirm with the legal requirements of the Data Protection Act, be covered by the University's notification under the Data Protection Act and conform with the policy outlined above.
16. The following statement is included on behalf of the Higher Education Statistics Agency:

" Some information held about you by your institution will be sent to the Higher Education Statistics Agency (HESA). This forms your HESA record, which contains mainly coded information including ethnicity and disability data. Your record, or parts of it, will be passed to those of the following bodies that require it to carry out their statutory functions in relation to the funding of education:

Department for Education and Skills (DfES)
 National Assembly for Wales (NAW)
 Scottish Executive (SE)
 Department for Employment and Learning, Northern Ireland (DEL(NI))
 Higher Education Funding Council for England (HEFCE)
 Higher Education Funding Council for Wales (HEFCW)
 Scottish Higher Education Funding Council (SHEFC)
 Teacher Training Agency (TTA)
 Department of Health (DH)
 Research Councils (RCs)

The data in your record will be used, primarily for statistical analysis, by HESA and the above bodies. This use may result in the publication and release of data to other approved users, which may include academic researchers and commercial bodies. Your record will not be used by HESA or any of the above bodies in a way that would affect you individually.

You may wish to note that your contact details will not be made available to HESA and that precautions are taken to minimise the risk of identification of individuals from the published and released data. None of the above bodies will be able to use the data provided to HESA in order to contact you.

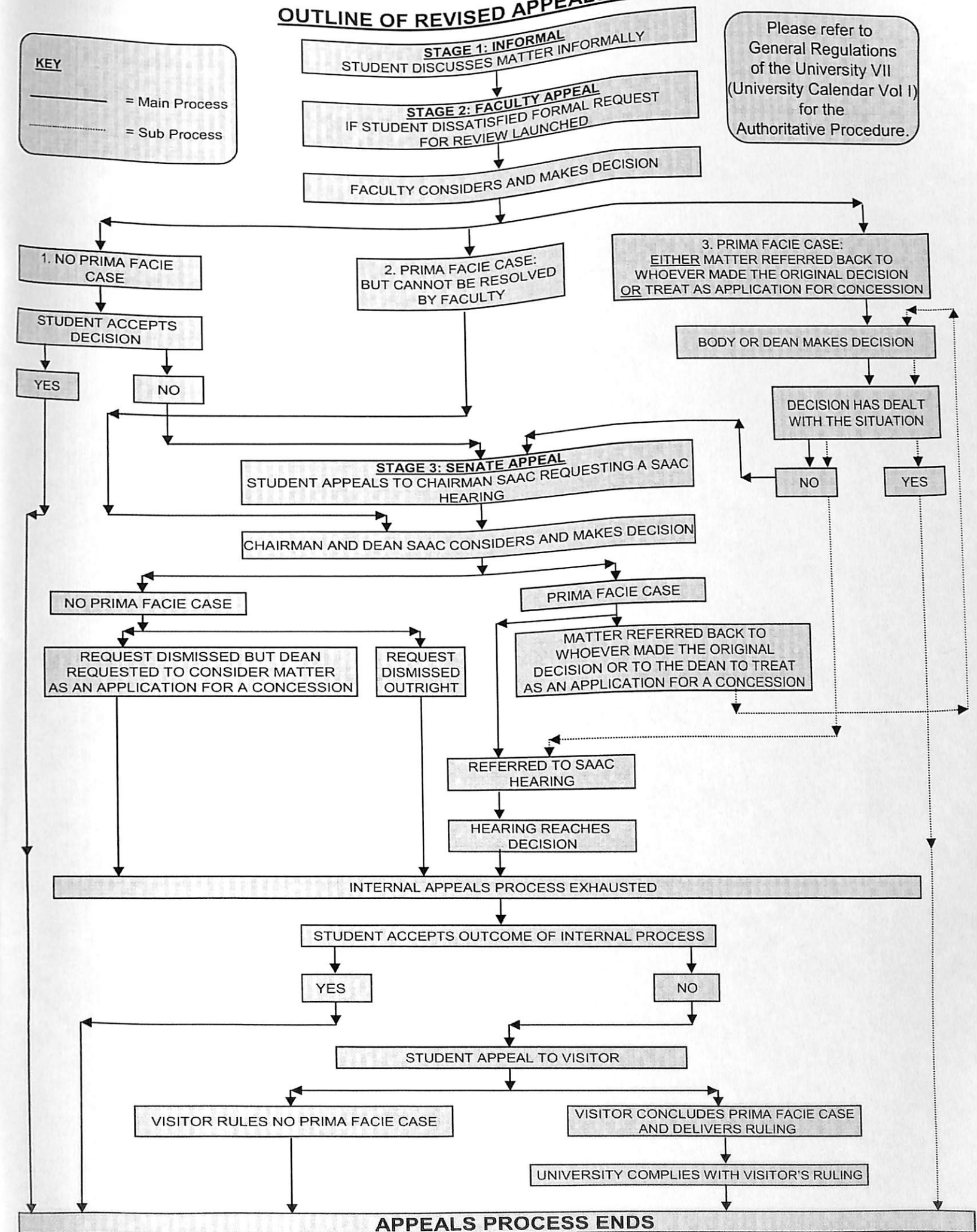
When you qualify, further data about you will be collected and information on how this will be used will be provided at that time.

Under the Data Protection Act 1998 you have the right to a copy of the data held about you by HESA, for a small fee. If you have any concerns about, or objections to, the use of data for these purposes, please contact HESA at www.hesa.ac.uk, or by writing to 95 Promenade, Cheltenham, GL50 1HZ. "

For further information about the University's policy on Data Protection or if you require a copy of this statement in an alternative format, please contact the Assistant Data Protection Officer (Assistant Registrar), Academic Office, University Offices, Durham.

Last updated 09.06.04

OUTLINE OF REVISED APPEALS PROCESS





DEPARTMENT OF PHYSICS

LEVEL 1

Modules in Physics

2004–2005

Rochester Building
Science Laboratories
South Road
Durham
DH1 3LE

physics.office@durham.ac.uk
<http://www.dur.ac.uk/physics>

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1. INTRODUCTION

The purpose of this booklet is to provide you with information on the aims of each Level 1 Physics module, the detailed syllabuses, the methods we use to teach the courses and the way in which you can obtain information and support if you have difficulties or questions. It also explains what is expected from you and the way in which we monitor your progress.

1.1. Director of Studies

In each academic year, there is a Director of Studies with responsibility for overseeing the teaching in that year. The Level 1 Director of Studies is **Dr Gordon Love (Room 249)**. He chairs regular meetings of the Level 1 course team, where details of syllabus compatibility, coherence and level are examined and refined. Like the other Directors of Studies, he is a member of the Departmental Teaching and Learning Committee, which reports to the Board of Studies in Physics where major policy issues are decided.

1.2. Director of Teaching and Learning

The Department has a Director of Teaching and Learning, **Professor Tom Shanks (Room 331)**, who works in association with the Directors of Studies at each Level to oversee the whole of the Department's undergraduate teaching programme. He also represents the Board of Studies in Physics at the meetings of the Faculty of Science Sub-Committee of the University's Teaching and Learning Committee.

1.3. Course Adviser

The Level 1 Course Adviser, **Dr Clare Woodward (Room 1)**, is available and willing to discuss any general aspects of the courses with you. If you have any doubts about suitability of a course to your interests or abilities, she will offer specific advice. If you have difficulties which cannot be resolved by the lecturers or your tutor, you should discuss the matter with the Course Adviser. She will consult with the Director of Studies to ensure that help is given.

If a change in registration is being envisaged, the matter should be discussed with the Course Adviser. Students

will be expected to complete all formalities involved with a module or degree course change within a week of the start of the Michaelmas Term.

The Course Adviser will welcome constructive suggestions regarding the courses or the Department and these will be passed to the Board of Studies via the Level 1 Director of Studies.

1.4. Natural Sciences Adviser

The Sub-Dean of the Faculty of Science manages the Natural Sciences programme on a day-to-day basis. In addition, there is an Adviser in each department to provide subject-specific guidance to Natural Sciences students. The Natural Sciences Adviser in the Department of Physics is **Dr Ian Terry (Room 28)**.

1.5. Students with Special Needs

The University is committed to full compliance with the aims of the Special Educational Needs and Disability Act 2001. Once a student has been accepted for a course of study, the University accepts responsibility to ensure appropriate provision for that student throughout his/her course. Students with disabilities can expect to be integrated into the normal University environment. They are encouraged and helped to be responsible for their own learning and to achieve their full academic potential.

Durham University Service for Students with Disabilities (DUSSD) aims to provide appropriate advice and support for all Durham students with a disability, dyslexia, medical or mental health condition which significantly affects study. DUSSD can advise you to organise special academic facilities if you have a disability and need some help. They will try to provide whatever support is necessary to enable you to study effectively and to make full use of your opportunities at University. This help will be specific and appropriate to you and relevant to the courses you choose.

Special arrangements and facilities may well be required by disabled students when taking examinations. These might include extra reading time or a separate quiet room and are intended to minimise the effects of disability, which are often exacerbated by examination conditions. DUSSD organises all the necessary examination concessions for hearing-impaired, visually impaired and dyslexic students who have made themselves known to them and requested such concessions. DUSSD also makes recommendations to

departments for students with other disabilities who have regular support from the Service.

For further advice, or to obtain a copy of the University's Disability Statement, please contact Durham University Service for Students with Disabilities (DUSSD), Pelaw House, Leazes Road, Durham, DH1 1TA, Tel: 0191 334 8115 (Voice and Minicom), Email: disabilities.service@durham.ac.uk.

1.6. Consultation with Members of Staff

If you have any questions on the subject or are experiencing difficulties with a lecture course, you should consult the member of staff giving the course as soon as possible. The consultation may be:

- immediately after the lecture;
- by calling on the lecturer concerned in his or her office;
- by email;
- by making an appointment with the lecturer at a mutually convenient time. Appointments are arranged by the secretary in the General Office of the Department. You should ask for an Appointment Form on which you should indicate times when you are available. The lecturer will be contacted by the secretary and will fix one of those times which is mutually convenient. You should call back a day later to pick up the form which confirms the appointment.

1.7. Staff-Student Consultative Committee

The Board of Studies has a Staff-Student Consultative Committee to provide an effective means of communication between staff and students. The Committee meets once per term. It has student representatives from each year and if you have issues you wish to raise, you should contact your year representatives.

The Staff-Student Consultative Committee also seeks feedback from all students on all aspects of their Physics courses by way of module questionnaires at the beginning of the Easter Term. The Staff-Student Consultative Committee reports to the Board of Studies, the body directly responsible for running the Department, and plays an active role in promoting quality teaching in the Department. An important function of the Staff-Student Consultative Committee is to elect the student representatives to the Board of

Studies. The latter act in an advisory capacity and also provide direct feedback to the student body.

The minutes of the meetings of the Staff-Student Consultative Committee are available on the Department's web site. Copies of the minutes of the Board of Studies in Physics are kept in a file in the Sir James Knott Room and may be consulted by student members of the Department.

If you have concerns about teaching which are not covered by these meetings and questionnaires, contact can be made directly with the Staff-Student Consultative Committee Chairman, **Dr Simon Morris (Room 257)**, with the Course Adviser or with the Level 1 Director of Studies.

1.8. Student Financial Support

The University is able to offer financial support to students who do not have enough money to live on and to cover their course costs. If this is you, contact the DSU Advice Centre in Dunelm House (internal 41775), or your College, for help and advice.

Physics students who receive financial support for their living and course costs from the University may also receive a Yates Bursary or a Michael Cross Bursary. These awards, which vary in value, were made possible by generous donations to the University and are intended to ensure that Physics students who experience financial hardship are not disadvantaged or hindered from taking advantage of all the opportunities available to them while reading for their degrees. For more details contact Mrs Elizabeth Lovett, Admissions Adviser (Student Financial Support) on e.l.lovett@durham.ac.uk.

1.9. Durham University Online

The virtual learning environment 'Durham University Online' (DUO) is a collection of online resources including links to web pages, lecture notes and summaries, communication tools like email and assessment features such as formative multiple choice quizzes. Your login area on DUO is where you can access all online course materials offered by your lecturers. Soon after your registration details have been entered onto the University's student records system (Banner), you will automatically be enrolled by the IT Service on the DUO courses related to the modules that you are taking. Details of how to logon to the DUO system are given at <http://duo.dur.ac.uk> and in

the IT Service publication 'Computing at Durham'. Individual lecturers will inform you during the year about its use for their courses. Students taking physics modules will also automatically be enrolled on the DUO course 'Physics Undergraduates', which contains administrative and other information that applies to all undergraduate students in the Department. The Department will also make use of the Announcements area in DUO to pass on important information to you so please get into the habit of logging in at least twice a week.

1.10. Module Timetables

The timetables for lecture courses and other activities are displayed on the undergraduate information notice boards, near Room 54 on the ground floor of the Department. Customised timetables can be generated using the University's online timetable facility at <http://timetable.dur.ac.uk>

1.11. Private Study

"An undergraduate module with effect from October 1998 is defined as a study unit comprising 200 hours of SLAT (Student Learning Activity Time) per annum and lasts one academic year" (*University of Durham Teaching and Learning Handbook*). The total "contact time" that a student spends in lectures, labs, tutorials, etc. is listed for each Physics Department module in the information which follows. In most cases this amounts to around 30% of the total SLAT. You would be wise to plan how best to use the remaining 70% (140 hours for a 20-credit module, i.e., 6.4 hours per week of a 22-week academic year per 20-credit module). Your tutor will be able to help you with this. This time is allocated within the module to be spent, not only in preparing submitted work (e.g. essays, lab reports, assessed problems), but in private study of the lecture course material and in revision. You are advised to organise your time in such a way that you are able to devote a number of hours each week to reviewing your lecture notes, reading around the subject and working through exercises extra to those which have been set by the lecturer. By so doing you will be developing your study and personal management skills and be giving yourself the best opportunity to gain a firm understanding of the topics as they unfold. By attending to any difficulties or misconceptions you have as the course progresses you will be in an excellent position at the end of the course to make the most of your revision time. Planning and preparation are the key to reducing examination stress.

1.12. Book Purchase Recommendation

The recommended text for the Level 1 physics core is

P.A. Tipler and G.P. Mosca, "Physics for Scientists and Engineers: Extended Version",
W.H. Freeman Publishers, price about £37.

Online resources for this book can be found at

<http://www.whfreeman.com/tipler>

1.13. Teach Yourself Physics Resources

The Department encourages self-instruction, using the recommended text and the computer-based package STOMP, which is available on the Networked PC Service, (username: student; password: physics).

1.14. Sir James Knott Room

The Sir James Knott Room (Room 132, on the first floor of the Rochester Building) is open during term time from 9.00 a.m. until 5.00 p.m. and provides a place of study within the Department for your use. Please respect the right of others to work in quietness. The Room contains a collection of texts of use to undergraduates, but this library is not maintained as a current reference source.

1.15. University Library

The Main Library automatically stocks the items in the textbook lists for each module (see pages 26-41). These lists make use of the following categorisation system:

- E - Essential Reading
- R - Recommended Reading
- B - Background Reading

Items identified as Essential Reading will be available in the Main Library's Reserve Collection and, in most cases, for 3-day loan. You may wish to consider purchasing your own copies of these books. Items in Recommended Reading will be provided in long loan and 3-day loan categories. Background materials will normally be found in the long loan category.

We welcome suggestions for other useful physics texts related to lecture courses and projects. Please make such recommendations via your physics tutor. All books purchased will be held in the Main University Library.

1.16. Use of Other University Libraries

Under reciprocal agreements students of this University are allowed to study in the libraries of other universities (of which they are not members) in, or near, their home towns during vacations. If you wish to make use of this vacation facility, you should simply apply directly to the library concerned, presenting your DSU card. The services that are available vary from library to library.

1.17. Physical and Astronomical Societies

The Physical and Astronomical Societies, to which most students belong, run an interesting series of lectures and visits, as well as social functions. The first meeting will normally be on the first Tuesday of the Michaelmas Term and the two societies will meet alternately on subsequent Tuesdays. Further information may be found on the societies' web pages:

<http://www.dur.ac.uk/physical.society>
<http://www.dur.ac.uk/astronomical.society>

1.18. Poster Session - Invitation

The poster session, in which the Special Essay Projects of the Level 3 students will be displayed, will be held during the last week of the Michaelmas Term. The provisional date for the poster session is Friday 10 December 2004. The authors of the posters will be present to answer any questions about their individual displays during the day. Level 1 students are warmly invited to tour the display and to talk to the individual poster authors about the subjects of their displays.

1.19. Student Records

Your Department record file contains:

- Your UCAS form,
- Annual Department registration forms,
- Your plagiarism forms,
- Annual examination results,

- Departmental tutors' report forms,
- Copies of letters received from you and sent to you.

Lists of student names are used in the preparation of registers for tutorials, practicals and examples classes and in the examinations. All such Departmental computer files are registered under the Data Protection Act. Each student's marks for all examinations and assessed work are confidential to the members of the Board of Examiners of the Department; aggregate marks are known to the members of the Faculty Board of Examiners, College Principals and Senior Tutors, the Examinations Department, and the individual student.

1.20. Early Registration for Next Year

Students who are progressing to the 2nd, 3rd or 4th year of study are normally expected to register at the end of their previous academic year at the notified time. Students who fail to register at the correct time are liable to pay an administration charge of £35.

In exceptional circumstances, students may request permission to register early. Normally the only grounds for early registration are:

1. academic commitments;
2. pastoral considerations;
3. representation of the University in a sporting or equivalent event (e.g. music or drama) at regional, national or international level. This must be associated with a recognized (DSU-ratified) university club or society.

Early registration will be permitted only when the results of the examinations are known and progress to the following year secured.

Three categories of students who wish to leave early are therefore distinguished:

1. students who are given permission by the relevant Faculty Dean to register early (who should pay no administration charge for this privilege);
2. students for whom permission is given to depart early but who cannot be permitted to register early because all the relevant facts are not known (these students are permitted to register in October, but will not be subject to the late registration charge unless they delay their registration until after the end of the first teaching week of the Michaelmas Term);
3. all other students who leave early without registering will be required to pay the late registration charge on their return in October.

Students who leave before their results are known are responsible for making contact with the University to obtain their results and to inform themselves of resit arrangements if necessary.

Closing date: Applications for early registration will be considered *up to the end of the Epiphany Term*. Applications received after this date will usually be rejected unless convincing evidence is provided as to why the application could not have been made by the end of the Epiphany Term, and an administration charge of £35 will be required. In no case will applications be considered after the beginning of the examination period.

To apply for early registration, complete the necessary form <http://www.dur.ac.uk/~dac0www4/2a5.doc> (or 2a2.doc) and present it for signature to the Departmental Administrator before the closing date.

1.21. Disclaimer

The information in this booklet is correct at the time of going to press in September 2004. The University, however, reserves the right to make changes without notice to regulations, programmes and syllabuses. If there is any conflict or disagreement between the information in this booklet and the module information published in the Faculty Handbook, the Faculty Handbook is definitive.

2. EXAMINATIONS AND ASSESSMENT

2.1. Regulations for B.Sc. and M.Sci.

The General Regulations for the B.Sc. and M.Sci. degrees and the special regulations for the courses described in this booklet are printed in Volume II of the current version of the Durham University Calendar, which is available for consultation in the main library or in the Physics Department General Office. An offprint of the B.Sc. and M.Sci. regulations may be obtained from the Science Faculty Office.

2.2. University Assessment Process

Full details of the University procedures for Examinations and Assessment may be found in the Teaching and Learning Handbook, which is available on-line at <http://www.dur.ac.uk/teachingandlearning.handbook/>. Details of the elements of assessment for all Level 1 Physics modules are given in this booklet.

2.3. Board of Examiners

The Board of Examiners is responsible for all assessment of Physics courses. It comprises all of the lecturers in Physics together with three external examiners. The Chairman is Professor Brian Tanner (Room 66) and the Secretary is Dr John Osborne (Room 320).

2.4. Examinations

The Department of Physics follows the marking guidelines set out by the University Senate:

Degree Class	Mark Range (%)
I	70-100
II(i)	60-69
II(ii)	50-59
III	40-49
Fail	0-39

2.5. Use of Electronic Calculators in Examinations

APPROVED types of electronic calculators may be used in all University and Departmental examinations set by the Board of Examiners in Physics.

An approved electronic calculator and its usage must conform to the following.

- Only the simplest 'scientific' type is allowed. *In particular a candidate will not be allowed to take into an examination any calculator which is programmable or can display graphics or has facilities for text storage or communications.* The calculator may be either solar or battery powered. Examples of allowed models which are currently widely available are Casio FX83 and Sharp EL531. Other equivalent or superseded models such as the Casio FX82 are also allowed. In general, models costing more than about £8 may have unacceptably sophisticated features.
- Invigilators will refuse to allow a candidate to use any calculator which, in the invigilator's opinion, does not conform to these standards.
- The candidate is responsible for making sure that the calculator is in working order and for providing spare batteries. Facilities for recharging batteries will not be available in the examination rooms.
- No sharing of calculators between candidates will be permitted nor will calculators be supplied by the Department or the Student Planning and Assessment Office.

Note: Different Boards of Examiners may apply different rules. Candidates sitting papers set by another Department must check the rules that apply.

The University examination regulations contain the provision that taking information stored in the memory of a calculator into an examination, unless specifically permitted in the rubric for a particular examination paper, will be treated as cheating, thereby constituting a major offence (for which a candidate may be rusticated or expelled from the university). An invigilator may immediately suspend a candidate believed to be cheating or dismiss him/her from an examination. Spot checks on calculators may be made.

2.6. Plagiarism, Cheating and Collusion

Your attention is drawn to the seriousness of plagiarism. Below is an example of the form which you will be required to complete at registration each year.

DEPARTMENT OF PHYSICS

PLAGIARISM

General Regulations of the University, Section VIII(D), state that

"In formal examinations and all assessed work prescribed in degree, diploma and certificate regulations, students should take care to acknowledge the work and opinions of others and avoid any appearance of representing them as their own. Unacknowledged quotations or close paraphrasing of other people's writing, amounting to the presentation of other persons' thoughts or writings as one's own, is plagiarism and will be penalised. In extreme cases, plagiarism may be classed as a dishonest practice under Section IV, 2(a)(ix) of the General Regulations and may lead to expulsion."

I (name) undertake that all assessed work to be submitted for my degree will be a result of my own work except where group project work is involved. In the case of a group project, the work will be prepared in collaboration with other members of the group. In all other cases material from the work of others not involved in the assessment will be acknowledged and quotations and paraphrases suitably indicated. I authorise the uploading of my work onto a plagiarism detection system, at the discretion of the Department of Physics, if plagiarism is suspected or for routine screening of work for plagiarised text.

Signed:

Date:

If a case of plagiarism, cheating or collusion is suspected by any member of the Board of Examiners in Physics the procedures outlined in the Teaching and Learning Handbook will be followed. Any proven case may result in a penalty ranging from a numerical deduction in the mark given for an assignment through to exclusion from the University depending on the severity of the case.

Cheating includes:

- Communication with or copying from any other student during an examination;
- Communication during an examination with any person other than a properly authorised invigilator or another authorised member of staff;
- Introducing any written or printed material into the examination room unless expressly permitted by the Board of Examiners in Physics or course regulations;
- Introducing any electronically stored information into the examination room, unless expressly permitted by the Board of Examiners in Physics or course regulations;
- Gaining access to unauthorised material during or before an examination;
- The provision or assistance in the provision of false evidence or knowledge or understanding in examinations.

Plagiarism includes:

- The verbatim copying of another's work without acknowledgement;
- The close paraphrasing of another's work by simply changing a few words, or altering the order of the presentation, without acknowledgement;
- Unacknowledged quotation of phrases from another's work;
- The deliberate and detailed presentation of another's concept as one's own.

Collusion includes:

- The conscious collaboration, without official approval (e.g. on weekly problems, lab reports, etc.), between two or more students in the preparation and production of work which is ultimately submitted by each in an identical, or substantially similar, form and/or represented by each to be the product of his or her individual efforts;
- The unauthorised co-operation between a student and another person in the preparation and production of work which is presented as the student's own.

2.7. Monitoring your Progress

The Board of Studies in Physics, of which all full-time academic staff are members, is responsible for ensuring that students are coping with the courses and meeting their academic commitments. You are *expected* to attend lectures and *required* to attend laboratory classes,

tutorials and examples classes, to undertake project work and to hand in assessed work.

Attendance at laboratory classes, tutorials and examples classes, and submission of work of various forms are part of the University's requirement to 'Keep Term'. Should you fail to attend or to hand in work, this will be noted and will soon result in your tutor delivering a verbal reprimand. Persistent default will result in a formal written warning, which may be followed by the initiation of Faculty disciplinary procedures.

2.8. Deadlines for Submitted Course Work

All modules in the Department require students to submit work that is assessed, either summatively or formatively. This work *must* be submitted by defined deadlines. If the work is not submitted by the deadline, it will not be assessed and a mark of 0 will be given to it. If it is known that required work cannot be submitted by the deadline and there is a good reason for this, the appropriate member of staff must be informed, in writing (which may include email), at least 24 hours before the deadline. If it is agreed that the late submission is justified then you will be informed in writing that the work will be accepted up to the approved later submission time.

Approval for the late submission of work *may* be given after the appropriate deadline in the case of mitigating circumstances. If you believe that mitigating circumstances, such as illness, prevented you from applying for an extension to a submission deadline, or caused you to fail to submit work by the deadline, you must contact the member of staff responsible for receiving the work as soon as possible to explain the circumstances (such as a medical certificate or letter from a counsellor) then you are advised to produce it. The member of staff administering the deadline will consider your situation and will *either*

- accept that you had good reason for having defaulted on your academic commitments and that you could not reasonably have negotiated in advance an extension to the deadline. In this case you will be permitted a retrospective extension to the deadline for the submission of your work; *or*
- not accept that you could not have negotiated an extension to the deadline. In this case a mark of 0 will be given for the work.

It is your responsibility to be aware of the deadlines for submission of assessed work. All such deadlines are displayed on the Department notice board and on the

"Physics Undergraduates" DUO course pages. Copies of this notice are available from the General Office. You may also be informed of deadlines by electronic mail or via your tutor.

2.9. Medical and Other Problems Affecting Attendance at Classes or Submission of Assessed Work

University and Departmental Procedures

Short-term problems or routine ailments that temporarily incapacitate

Attendance at Classes

If you are unwell and cannot attend classes then you should inform your college and department(s), and seek medical advice if required. It is not necessary to obtain a medical certificate simply to justify absence from classes. However, if you are ill enough to visit the doctor, it would be wise to discuss with him/her whether it is appropriate to obtain a medical certificate – this will usually be the case if your studies are being seriously affected because the illness is serious or persists for an appreciable length of time. The doctor will make a professional judgement on this and the University will accept his/her view of whether it was appropriate to provide a certificate. The procedure for obtaining a certificate is outlined in the University's Teaching and Learning Handbook.

Submission of Assessed Work

If you are ill for a short period of time with a minor complaint or other problem and as a result

- expect that you will not be able to hand in summatively assessed work to the required deadline; *or*
- miss a class which leads directly to the submission of work which counts towards summative assessment (e.g. a practical class leading to a summatively assessed lab report) and therefore will not be able to hand in the associated work

then you must

- Complete a self-certification of illness form (available from your college office) stating the nature and duration of your illness. This requires the signature of the Senior Tutor of your college; the college will then pass the form to the Department. You may self-certify on up to two occasions per term for a maximum of five

consecutive days on each occasion. You should submit the self-certification form as soon as possible: this may mean, particularly if you live out of college, submitting it after you have recovered but you should do this without delay once you are better. Longer or more frequent absence or incapacity must be explained with the support of a medical certificate; *and*

- Inform the Department according to the procedures described in Section 2.8. In particular you should apply for an extension to the submission deadline for the affected work by contacting the appropriate member of staff *in writing* (which may include email) at least 24 hours before the deadline. However, in the case of deadlines for the submission of weekly problems or weekly assessment of laboratory performance, you will be excused the week's assessment under these circumstances, simply on the basis of your self-certification of illness form, and there is no need to apply for an extension.

If you believe that mitigating circumstances, such as illness, prevented you from applying for an extension to a submission deadline, or caused you to fail to submit work by the deadline, Section 2.8 outlines the procedures you should follow.

Where the period of incapacity occurs in the days leading up to, or takes place during, the examination period and you believe that your preparation for the examinations has been *seriously* affected or you are likely to, or in fact do, miss an examination, the self-certification of illness form *must* be supported by a medical certificate from your GP, obtained *at the time of the illness*. The Board of Examiners will not consider a submission which is not supported by professional evidence.

Long-term medical conditions or serious problems affecting academic performance

If your academic performance is *seriously* affected by long-term or recurring illness, at any time during your programme of study, especially in the period leading up to or during the examination period, you *must* obtain a medical report from your GP or Consultant *at the time of illness*. The procedure for obtaining a certificate is outlined in the University's Teaching and Learning Handbook.

Such evidence needs to be submitted *each year* if you wish your condition to be taken into account in reviewing your performance. It is not realistic to ask Boards of Examiners to bring forward such information from year to year: they are not in a position to know what is and is not current information, and to bring forward out-dated information would contravene

the Data Protection Act. Information supplied in connection with the admissions process or at registration similarly needs to be restated specifically for the Board of Examiners if you believe that it may be relevant to your performance in assessments.

Deadline for the submission of evidence of medical or other problems to the Board of Examiners

If there are mitigating circumstances (such as illness or bereavement) that could have seriously affected your assessed work or examinations and that you wish to bring to the attention of the Board of Examiners, then a 'Mitigating Circumstances' form (available from your college or department) must be submitted to the Chairman of the Board of Examiners, Professor B.K. Tanner, via your College or Society. Supporting evidence such as a doctor's certificate or other evidence from an independent professional such as a counsellor or member of DUSSD should be submitted with the form if available and appropriate. The Board can only consider circumstances affecting your performance if full documentation reaches the Physics Department before the relevant meeting of the Examiners in early June. You will be notified of the precise deadline for the academic year 2004-2005 at the start of the Michaelmas Term.

Failure to communicate such information known to you before the Board of Examiners' decisions are made prevents the information being used at a later date as the basis for an appeal. You must not assume that, because you have told someone in the University of your problems, the Board of Examiners will know. Conversely, the University will not pass information received by the Board of Examiners in the context of mitigating circumstances to other people in the University for any other purpose. *The submission of a Mitigating Circumstances form therefore does not constitute a disclosure of disability under the Special Needs and Disability Act 2001.*

Further Information

Full details of the University's procedures relating to the need for medical reports and the extent to which Boards of Examiners can make allowance for health and other problems may be found in section 6.1.4.14 of the Teaching and Learning Handbook. Online access may be made by following links from

<http://www.dur.ac.uk/teachingandlearning.handbook>

Information is also given to undergraduates in Section 6 of Volume I of the Science Faculty Handbook, which you will find online at

<http://www.dur.ac.uk/faculty.handbook>

3. TEACHING AND LEARNING

3.1. Degree Frameworks

BSc PHYSICS (F300)

Programme offered at: Durham.

Mode of study: this programme is available full-time.

LEVEL 1 (Certificate)

1	Discovery Skills in Physics	PHYS1101	20
2-3	Foundations of Physics 1	PHYS1122	40
4-5	EITHER Single Mathematics A #	MATH1561	20
	AND Single Mathematics B #	MATH1571	20
	OR Core Mathematics A	MATH1012	40

6 One 20 credit open Level 1 module chosen from those offered by any Board of Studies

These modules must be passed at 40% or above in order to progress to the Ordinary degree at the next level.

LEVEL 2 (Diploma)

1	Foundations of Physics 2	PHYS2511	20
2	Mathematical Methods in Physics	PHYS2521	20
3	Thermal and Condensed Matter Physics	PHYS2531	20
4	Stars and Galaxies	PHYS2541	20
5	Laboratory Skills and Practice	PHYS2551	20
6	Electronics and Physics Laboratory	PHYS2561	20

LEVEL 3 (Degree)

1-2	Foundations of Physics 3	PHYS3522	40
3	Key Skills B	PHYS3571	20
4	Team Project	PHYS3581	20
5	Laboratory Project	PHYS3601	20
6	EITHER One 20 credit module chosen from List A		20
	OR One 20 credit module chosen from those offered by another Board of Studies, subject to approval by the Chairman of the Board of Studies in Physics		20

BSc PHYSICS AND ASTRONOMY (FF35)

Programme offered at: Durham.

Mode of study: this programme is available full-time.

LEVEL 1 (Certificate)

1	Discovery Skills in Physics	PHYS1101	20
2-3	Foundations of Physics 1	PHYS1122	40
4-5	EITHER Single Mathematics A #	MATH1561	20
	AND Single Mathematics B #	MATH1571	20
	OR Core Mathematics A	MATH1012	40

6 One 20 credit open Level 1 module chosen from those offered by any Board of Studies

These modules must be passed at 40% or above in order to progress to the Ordinary degree at the next level.

LEVEL 2 (Diploma)

1	Foundations of Physics 2	PHYS2511	20
2	Mathematical Methods in Physics	PHYS2521	20
3	Thermal and Condensed Matter Physics	PHYS2531	20
4	Stars and Galaxies	PHYS2541	20
5	Laboratory Skills and Practice	PHYS2551	20
6	Electronics and Physics Laboratory	PHYS2561	20

LEVEL 3 (Degree)

1-2	Foundations of Physics 3	PHYS3522	40
3	Key Skills B	PHYS3571	20

4	Team Project	PHYS3581	20
5	Laboratory Project	PHYS3601	20
6	Astrophysics	PHYS3541	20

MSci PHYSICS (F303)

Programme offered at: Durham.
Mode of study: this programme is available full-time.

LEVEL 1 (Certificate)

1	Discovery Skills in Physics	PHYS1101	20
2-3	Foundations of Physics 1	PHYS1122	40
4-5	EITHER Single Mathematics A # AND Single Mathematics B #	MATH1561	20
	OR Core Mathematics A	MATH1571	20
6	One 20 credit open Level 1 module chosen from those offered by any Board of Studies	MATH1012	40

These modules must be passed at 40% or above in order to progress to the BSc Ordinary degree in Physics or Physics and Astronomy at the next level.

LEVEL 2 (Diploma)

1	Foundations of Physics 2	PHYS2511	20
2	Mathematical Methods in Physics	PHYS2521	20
3	Thermal and Condensed Matter Physics	PHYS2531	20
4	Stars and Galaxies	PHYS2541	20
5	Laboratory Skills and Practice	PHYS2551	20
6	Electronics and Physics Laboratory	PHYS2561	20

Notes:

Students who have successfully completed Levels 1 and 2 of the MSci in Physics in accordance with the Core Regulations may, with the permission of the Chairman or Chairwoman of the Board of Studies in Physics, change their registration to the MSci in Theoretical Physics or Physics and Astronomy;
Students who fail to achieve the standard required under the Core Regulations for progression to Level 3 of the MSci in Physics but who achieve the standard required for progression to Level 3 of a Bachelors programme may progress to Level 3 of the BSc in Physics or Physics and Astronomy in the Honours or Ordinary stream in accordance with the Core Regulations;
A student who is qualified to progress from Level 2 to Level 3 of the MSci in Physics but wishes to transfer to Level 3 of the BSc in Physics or Physics and Astronomy shall be permitted to do so.

LEVEL 3 (Degree)

1-2	Foundations of Physics 3		
3	Key Skills A		40
4	Laboratory Project	PHYS3522	20
5-6	EITHER Modules to the value of 40 credits chosen from List A OR One 20 credit module chosen from List A AND one 20 credit module chosen from those offered by another Board of Studies, subject to approval by the Chairman of the Board of Studies in Physics	PHYS3561 PHYS3601	20 20

Notes:

For students who entered Level 1 before October 2002:

Students who at the end of Level 3 have obtained an overall average of 40% for the modules taken in Levels 2 and 3, these modules having been weighted in the proportion 2:3 for Levels 2 and 3, will be allowed to proceed to Level 4;
Students whose achievement at the end of Level 3 does not qualify them to proceed to Level 4 may be awarded the degree of Bachelor of Physics (BPhys) at either Honours or Ordinary level in accordance with the Transitional Undergraduate Regulations for the classification of degrees.

For students who entered Level 1 from October 2002:

Students whose achievement at the end of Level 3 does not qualify them to proceed to Level 4 may be awarded the degree of Bachelor of Physics (BPhys) at either Honours or Ordinary level in accordance with the Core Regulations for the award of a Bachelors degree.

LEVEL 4 (Degree)

1-3	Project		
4-6	EITHER Modules to the value of 60 credits chosen from List B OR Modules to the value of 40 credits chosen from List B AND one 20 credit module chosen from those offered by another Board of Studies, subject to approval by the Chairman of the Board of Studies in Physics	PHYS4213	60

Notes:

For students who entered Level 1 before October 2002:

Those students who do not satisfy the examiners on the basis of their performance in Levels 2, 3 and 4 may be awarded an MSci Pass degree;

The Board of Examiners shall consider the position of students who have missed certain papers in their Final Honours Examinations,

either through ill health or other sufficient cause. If 75% or more of the evidence, which would have been provided had they completed the examination, is available, the Board of Examiners may award a classified MSci degree or an MSci Pass degree as appropriate on the basis of the available evidence. If less than 75% of the evidence is available, subject to the provision of medical evidence or evidence of other good cause, Honours students shall be considered for the award of an Aegrotat degree (or, if they are not deemed worthy of an Honours degree, for an MSci Pass degree). If the Dean of the Faculty, acting on the recommendation of the examiners and in consultation with the Chairman or Chairwoman of the Teaching and Learning Committee considers that the student would have obtained an Honours standard, an unclassified Aegrotat degree may be awarded. If the Dean of the Faculty, acting on the recommendation of the examiners and in consultation with the Chairman or Chairwoman of the Teaching and Learning Committee, considers that the student would not have reached the standard for the award of an MSci Honours degree, an MSci Pass degree may be awarded.

For students who entered Level 1 from October 2002:

Students whose achievement at the end of Level 4 does not qualify them to be awarded the degree of MSci in Physics may be awarded the degree of Bachelor of Physics (BPhys) with Honours in accordance with the Core Regulations for the award of a Bachelors degree.

MSci PHYSICS AND ASTRONOMY (FFH5)

Programme offered at: Durham.

Mode of study: this programme is available full-time.

LEVEL 1 (Certificate)

1	Discovery Skills in Physics	PHYS1101	20
2-3	Foundations of Physics 1	PHYS1122	40
4-5	EITHER Single Mathematics A # AND Single Mathematics B #	MATH1561	20
	OR Core Mathematics A	MATH1571	20
6	One 20 credit open Level 1 module chosen from those offered by any Board of Studies	MATH1012	40

These modules must be passed at 40% or above in order to progress to the BSc Ordinary degree in Physics or Physics and Astronomy at the next level.

LEVEL 2 (Diploma)

1	Foundations of Physics 2	PHYS2511	20
2	Mathematical Methods in Physics	PHYS2521	20
3	Thermal and Condensed Matter Physics	PHYS2531	20
4	Stars and Galaxies	PHYS2541	20
5	Laboratory Skills and Practice	PHYS2551	20
6	Electronics and Physics Laboratory	PHYS2561	20

Notes:

Students who have successfully completed Levels 1 and 2 of the MSci in Physics and Astronomy in accordance with the Core Regulations may, with the permission of the Chairman or Chairwoman of the Board of Studies in Physics, change their registration to the MSci in Theoretical Physics or Physics;
Students who fail to achieve the standard required under the Core Regulations for progression to Level 3 of the MSci in Physics and Astronomy but who achieve the standard required for progression to Level 3 of a Bachelors programme may progress to Level 3 of the BSc in Physics or Physics and Astronomy in the Honours or Ordinary stream in accordance with the Core Regulations;
A student who is qualified to progress from Level 2 to Level 3 of the MSci in Physics and Astronomy but wishes to transfer to Level 3 of the BSc in Physics or Physics and Astronomy shall be permitted to do so.

LEVEL 3 (Degree)

1-2	Foundations of Physics 3	PHYS3522	40
3	Key Skills A	PHYS3561	20
4	Astrophysics	PHYS3541	20
5	EITHER Laboratory Project OR Mathematics Workshop	PHYS3601	20
6	EITHER One 20 credit module chosen from List A OR One 20 credit module chosen from those offered by another Board of Studies, subject to approval by the Chairman of the Board of Studies in Physics	PHYS3591	20

Notes:

For students who entered Level 1 before October 2002:

Students who at the end of Level 3 have obtained an overall average of 40% for the modules taken in Levels 2 and 3, these modules having been weighted in the proportion 2:3 for Levels 2 and 3, will be allowed to proceed to Level 4;
Students whose achievement at the end of Level 3 does not qualify them to proceed to Level 4 may be awarded the degree of Bachelor of Physics (BPhys) at either Honours or Ordinary level in accordance with the Transitional Undergraduate Regulations for the classification of degrees.

For students who entered Level 1 from October 2002:

Students whose achievement at the end of Level 3 does not qualify them to proceed to Level 4 may be awarded the degree of Bachelor of Physics (BPhys) at either Honours or Ordinary level in accordance with the Core Regulations for the award of a Bachelors degree.

LEVEL 4 (Degree)			
1-3	Project	PHYS4213	60
4	Advanced Astrophysics	PHYS4161	20
5-6	EITHER	Modules to the value of 40 credits chosen from List B	
	OR	Modules to the value of 20 credits chosen from List B	
		AND one 20 credit module chosen from those offered by another Board of Studies, subject to approval by the Chairman of the Board of Studies in Physics	

Notes:

For students who entered Level 1 before October 2002:

Those students who do not satisfy the examiners on the basis of their performance in Levels 2, 3 and 4 may be awarded an MSci Pass degree;

The Board of Examiners shall consider the position of students who have missed certain papers in their Final Honours Examinations, either through ill health or other sufficient cause. If 75% or more of the evidence, which would have been provided had they completed the examination, is available, the Board of Examiners may award a classified MSci degree or an MSci Pass degree as appropriate on the basis of the available evidence. If less than 75% of the evidence is available, subject to the provision of medical evidence or evidence of other good cause, Honours students shall be considered for the award of an Aegrotat degree (or, if they are not deemed worthy of an Honours degree, for an MSci Pass degree). If the Dean of the Faculty, acting on the recommendation of the examiners and in consultation with the Chairman or Chairwoman of the Teaching and Learning Committee considers that the student would have obtained an Honours standard, an unclassified Aegrotat degree may be awarded. If the Dean of the Faculty, acting on the recommendation of the examiners and in consultation with the Chairman or Chairwoman of the Teaching and Learning Committee, considers that the student would not have reached the standard for the award of an MSci Honours degree, an MSci Pass degree may be awarded.

For students who entered Level 1 from October 2002:

Students whose achievement at the end of Level 4 does not qualify them to be awarded the degree of MSci in Physics and Astronomy may be awarded the degree of Bachelor of Physics (BPhys) with Honours in accordance with the Core Regulations for the award of a Bachelors degree.

MSci THEORETICAL PHYSICS (F340)

Programme offered at: Durham.

Mode of study: this programme is available full-time.

LEVEL 1 (Certificate)

1	Discovery Skills in Physics		
2-3	Foundations of Physics 1		
4-5	EITHER	Single Mathematics A #	PHYS1101 20
		AND Single Mathematics B #	PHYS1122 20
	OR	Core Mathematics A	MATH1561 20
6	One 20 credit open Level 1 module chosen from those offered by any Board of Studies	MATH1571 40	
	# These modules must be passed at 40% or above in order to progress to the BSc Ordinary degree in Physics or Physics and Astronomy at the next level.	MATH1012 20	

LEVEL 2 (Diploma)

1	Foundations of Physics 2		
2	Mathematical Methods in Physics		
3	Thermal and Condensed Matter Physics	PHYS2511	20
4	Stars and Galaxies	PHYS2521	20
5	Laboratory Skills and Practice	PHYS2531	20
6	Electronics and Physics Laboratory	PHYS2541	20
		PHYS2551	20
		PHYS2561	20

Notes:

Students who have successfully completed Levels 1 and 2 of the MSci in Theoretical Physics in accordance with the Core Regulations may, with the permission of the Chairman or Chairwoman of the Board of Studies in Physics, change their registration to the MSci in Theoretical Physics or Physics and Astronomy;

Students who fail to achieve the standard required under the Core Regulations for progression to Level 3 of the MSci in Theoretical Physics but who achieve the standard required for progression to Level 3 of a Bachelors programme may progress to Level 3 of the BSc in Physics or Physics and Astronomy in the Honours or Ordinary stream in accordance with the Core Regulations;

A student who is qualified to progress from Level 2 to Level 3 of the MSci in Theoretical Physics but wishes to transfer to Level 3 of the BSc in Physics or Physics and Astronomy shall be permitted to do so.

LEVEL 3 (Degree)

1-2	Foundations of Physics 3		
3	Key Skills A		
4	Theoretical Physics		
5	Mathematics Workshop		
6	EITHER	One 20 credit module chosen from List A	PHYS3522 40
	OR	One 20 credit module chosen from those offered by another Board of Studies,	PHYS3561 20
			PHYS3551 20
			PHYS3591 20

subject to approval by the Chairman of the Board of Studies in Physics

Notes:

For students who entered Level 1 before October 2002:

Students who at the end of Level 3 have obtained an overall average of 40% for the modules taken in Levels 2 and 3, these modules having been weighted in the proportion 2:3 for Levels 2 and 3, will be allowed to proceed to Level 4;

Students whose achievement at the end of Level 3 does not qualify them to proceed to Level 4 may be awarded the degree of Bachelor of Physics (BPhys) at either Honours or Ordinary level in accordance with the Transitional Undergraduate Regulations for the classification of degrees.

For students who entered Level 1 from October 2002:

Students whose achievement at the end of Level 3 does not qualify them to proceed to Level 4 may be awarded the degree of Bachelor of Physics (BPhys) at either Honours or Ordinary level in accordance with the Core Regulations for the award of a Bachelors degree.

LEVEL 4 (Degree)

1-3	Project	PHYS4213	60
4	Advanced Theoretical Physics	PHYS4141	20
5-6	EITHER	Modules to the value of 40 credits chosen from List B	
	OR	One 20 credit module chosen from List B	
		AND one 20 credit module chosen from those offered by another Board of Studies, subject to approval by the Chairman of the Board of Studies in Physics	

Notes:

For students who entered Level 1 before October 2002:

Those students who do not satisfy the examiners on the basis of their performance in Levels 2, 3 and 4 may be awarded an MSci Pass degree;

The Board of Examiners shall consider the position of students who have missed certain papers in their Final Honours Examinations, either through ill health or other sufficient cause. If 75% or more of the evidence, which would have been provided had they completed the examination, is available, the Board of Examiners may award a classified MSci degree or an MSci Pass degree as appropriate on the basis of the available evidence. If less than 75% of the evidence is available, subject to the provision of medical evidence or evidence of other good cause, Honours students shall be considered for the award of an Aegrotat degree (or, if they are not deemed worthy of an Honours degree, for an MSci Pass degree). If the Dean of the Faculty, acting on the recommendation of the examiners and in consultation with the Chairman or Chairwoman of the Teaching and Learning Committee considers that the student would have obtained an honours standard, an unclassified Aegrotat degree may be awarded. If the Dean of the Faculty, acting on the recommendation of the examiners and in consultation with the Chairman or Chairwoman of the Teaching and Learning Committee, considers that the student would not have reached the standard for the award of an MSci Honours degree, an MSci Pass degree may be awarded.

For students who entered Level 1 from October 2002:

Students whose achievement at the end of Level 4 does not qualify them to be awarded the degree of MSci in Theoretical Physics may be awarded the degree of Bachelor of Physics (BPhys) with Honours in accordance with the Core Regulations for the award of a Bachelors degree.

MODULE LISTS: PHYSICS

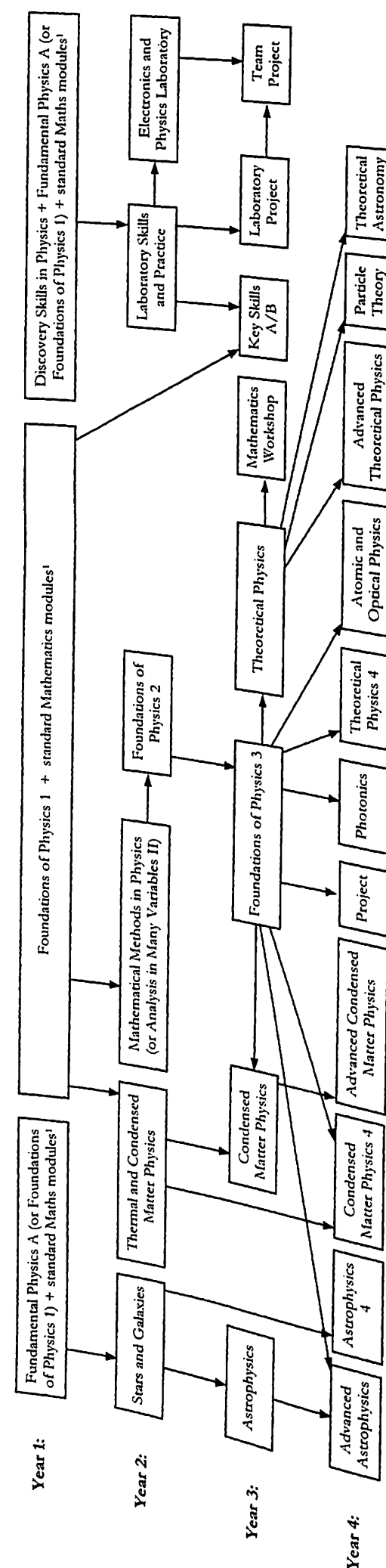
LIST A

Condensed Matter Physics	PHYS3531	20
Astrophysics	PHYS3541	20
Theoretical Physics	PHYS3551	20

LIST B

Advanced Condensed Matter Physics	PHYS4151	20
Advanced Astrophysics	PHYS4161	20
Advanced Theoretical Physics	PHYS4141	20
Particle Theory	PHYS4181	20
Theoretical Astronomy	PHYS4201	20
Atomic and Optical Physics	PHYS4121	20
Photonics	PHYS4171	20
Condensed Matter Physics 4	PHYS4111	20
Astrophysics 4	PHYS4131	20
Theoretical Physics 4	PHYS4191	20

3.2. Prerequisites and Corequisites for Physics Modules



¹ The 'standard Mathematics modules' at Level 1 are:
Single Mathematics A and Single Mathematics B
OR
Core Mathematics A
OR
Maths for Engineers and Scientists

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3.3. B.Sc. Degrees in Natural Sciences

The patterns of study that are available to a student on the B.Sc. Natural Sciences programme (3 years) are:

- a Natural Sciences degree in two or more subjects;
- a Joint Honours degree in two subjects. The possible degree titles within this option are as follows:

- B.Sc. Joint Honours in A and B
- B.Sc. Joint Honours in A with B

where A and B are the subject titles.

B.Sc. Natural Sciences degree

You can build on your first-year studies in one or two subjects and then combine advanced modules in these subjects with a new subject(s) at a lower level in year two. In your final year you study two or three subjects, all of which you must have studied in earlier years. With this route you would graduate with a B.Sc. Honours in Natural Sciences.

B.Sc. Joint Honours degree in two subjects

With a Joint Honours degree, you study the same two subjects in all three years, but you are allowed to study other subjects as well in your first year. The difference between the two types of Joint Honours degree is only in the balance between the two subjects over the final two years of the degree. If the balance is equal then it is an 'and' degree and if it is balanced towards one subject it is a 'with' degree. For Physics, the subjects currently available for combination in the B.Sc. Joint Honours 'and' and 'with' degrees are:

Anthropology, Chemistry, Computer Science, Earth Science, Economics, Mathematics, Philosophy

The above subjects are also available for combination in the B.Sc. Joint Honours 'with Astronomy' degree.

Modules available within the B.Sc. Natural Sciences programme

The modules that form the Natural Sciences programme are listed in the Science Faculty Handbook and at <http://www.dur.ac.uk/natural.sciences>. You can choose modules not contained within the programme, provided that no more than 120 credits are from outside the programme over Levels 1, 2 and 3. All choices of modules require the approval of the Sub-Dean of the Faculty of Science and must be timetable compatible.

Physics modules available to B.Sc. Natural Sciences students

The Level indicates the year in which modules are normally taken, but it is often the case that students take modules from the adjacent Level beneath the year of study.

Level 1:

PHYS1071	Astronomy for All
PHYS1081	Introduction to Astronomy
PHYS1101	Discovery Skills in Physics
PHYS1111	Fundamental Physics A
PHYS1122	Foundations of Physics 1
PHYS1131	Fundamental Physics B

Level 2:

PHYS2511	Foundations of Physics 2
PHYS2521	Mathematical Methods in Physics
PHYS2531	Thermal and Condensed Matter Physics
PHYS2541	Stars and Galaxies
PHYS2551	Laboratory Skills and Practice
PHYS2561	Electronics and Physics Laboratory

Level 3:

PHYS3522	Foundations of Physics 3
PHYS3531	Condensed Matter Physics
PHYS3541	Astrophysics
PHYS3551	Theoretical Physics
PHYS3571	Key Skills B
PHYS3581	Team Project
PHYS3591	Mathematics Workshop
PHYS3601	Laboratory Project

Students studying within the B.Sc. Natural Sciences programme will often progress from one year to the next in a particular subject, whether they are studying for a Natural Sciences degree in more than two subjects or for a Joint Honours degree. All students wishing to take Physics modules at Level 2 or above must have taken PHYS1122 Foundations of Physics 1¹ *plus*

either MATH1561 Single Mathematics A and MATH1571 Single Mathematics B
or MATH1012 Core Mathematics A
or MATH1551 Maths for Engineers and Scientists.

For students following a B.Sc. Joint Honours degree involving Physics modules, there are specific modules required in each year and these are listed in the following guide frameworks (applicable to students currently in Year 1). It is assumed that modules can be taken only if the appropriate prerequisites, corequisites and excluded combinations have been satisfied.

¹ PHYS1111 Fundamental Physics A may be substituted for PHYS1122 Foundations of Physics 1 in certain cases, see diagram on page 16.

**BSc JOINT HONOURS (CFG0)
X WITH PHYSICS**

Programme offered at: Durham.
Mode of study: this programme is available full-time.

LEVEL 1 (Certificate)			
1-2	Foundations of Physics 1		
3-4	EITHER Single Mathematics A AND Single Mathematics B OR Core Mathematics A OR Maths for Engineers and Scientists AND one 20 credit open Level 1 module chosen from those offered by any Board of Studies	PHYS1122 MATH1561 MATH1571 MATH1012 MATH1551	40 20 20 40 20
5-6	Modules to the value of 40 credits chosen from those offered by any Board of Studies		

LEVEL 2 (Diploma)			
1-6	Modules to the value of 120 credits, with up to 60 credits chosen from the compatible Level 1 and Level 2 physics modules, and the remainder chosen from those offered by another Board of Studies		

LEVEL 3 (Degree)			
1-6	Modules to the value of 120 credits, with up to 60 credits chosen from the compatible Level 2 and Level 3 physics modules, and the remainder chosen from those offered by another Board of Studies		

Notes:
The number of credits in subject X must be greater than the number of credits in physics over the last two Levels.

**BSc JOINT HONOURS (CFG0)
X WITH ASTRONOMY**

Programme offered at: Durham.
Mode of study: this programme is available full-time.

LEVEL 1 (Certificate)			
1	Discovery Skills in Physics		
2-3	EITHER Foundations of Physics 1 OR Fundamental Physics A AND one 20 credit open Level 1 module chosen from those offered by any Board of Studies	PHYS1101 PHYS1122 PHYS1111	20 40 20
4-5	EITHER Single Mathematics A OR AND Single Mathematics B OR Core Mathematics A OR Maths for Engineers and Scientists AND one 20 credit open Level 1 module chosen from those offered by any Board of Studies	MATH1561 MATH1571 MATH1012 MATH1551	20 20 40 20
6	One 20 credit open Level 1 module chosen from those offered by any Board of Studies		

LEVEL 2 (Diploma)			
1	Stars and Galaxies		
2	Laboratory Skills and Practice		
3	One 20 credit module chosen from the compatible Level 1 and Level 2 physics modules (excluding PHYS1081 Introduction to Astronomy)	PHYS2541 PHYS2551	20 20
4-6	Modules to the value of 60 credits chosen from those offered by another Board of Studies		

LEVEL 3 (Degree)			
1	Astrophysics		
2	Laboratory Project		
3-6	Modules to the value of 80 credits chosen from those offered by another Board of Studies	PHYS3541 PHYS3601	20 20

**BSc JOINT HONOURS (CFG0)
PHYSICS AND X, WHERE X IS NOT MATHEMATICS**

Programme offered at: Durham.
Mode of study: this programme is available full-time.

LEVEL 1 (Certificate)			
1-2	Foundations of Physics 1	PHYS1122	40
3	EITHER Discovery Skills in Physics OR One 20 credit open Level 1 module chosen from those offered by any Board of Studies	PHYS1101	20
4	One 20 credit open Level 1 module chosen from those offered by any Board of Studies		
5-6	EITHER Single Mathematics A AND Single Mathematics B OR Core Mathematics A OR Maths for Engineers and Scientists AND one 20 credit open Level 1 module chosen from those offered by any Board of Studies	MATH1561 MATH1571 MATH1012 MATH1551	20 20 40 20

Notes:
The module PHYS1101 Discovery Skills in Physics must be taken in Year 1 or Year 2.

LEVEL 2 (Diploma)			
1	Foundations of Physics 2	PHYS2511	20
2	Mathematical Methods in Physics	PHYS2521	20
3	EITHER Discovery Skills in Physics OR Laboratory Skills and Practice OR Stars and Galaxies OR One 20 credit module chosen from those offered by another Board of Studies	PHYS1101 PHYS2551 PHYS2541	20 20 20
4	EITHER Thermal and Condensed Matter Physics OR Stars and Galaxies OR Electronics and Physics Laboratory OR One 20 credit module chosen from those offered by another Board of Studies	PHYS2531 PHYS2541 PHYS2561	20 20 20
5-6	Modules to the value of 40 credits chosen from those offered by another Board of Studies		

Notes:
The module PHYS2551 Laboratory Skills and Practice must be taken in Year 2 or Year 3.

LEVEL 3 (Degree)			
1-2	Foundations of Physics 3	PHYS3522	40
3	EITHER Laboratory Skills and Practice OR One 20 credit module chosen from the compatible Level 2 or Level 3 physics modules	PHYS2551	20
4	OR One 20 credit module chosen from those offered by another Board of Studies EITHER One 20 credit module chosen from the compatible Level 2 or Level 3 physics modules OR One 20 credit module chosen from those offered by another Board of Studies		
5-6	Modules to the value of 40 credits chosen from those offered by another Board of Studies		

Notes:
In Years 2 and 3 the modules selected must be from the same two subjects and the number of credits in each subject must be equal over these two Years.

**BSc JOINT HONOURS (CFG0)
PHYSICS WITH X, WHERE X IS NOT MATHEMATICS**

Programme offered at: Durham.
Mode of study: this programme is available full-time.

LEVEL 1 (Certificate)			
1-2	Foundations of Physics 1	PHYS1122	40
3	EITHER Discovery Skills in Physics OR One 20 credit open Level 1 module chosen from those offered by any Board of Studies	PHYS1101	20
4	One 20 credit open Level 1 module chosen from those offered by any Board of Studies		
5-6	EITHER Single Mathematics A AND Single Mathematics B OR Core Mathematics A OR Maths for Engineers and Scientists AND one 20 credit open Level 1 module chosen from those offered by any Board of Studies	MATH1561 MATH1571 MATH1012 MATH1551	20 20 40 20

Board of Studies

Notes:

The module PHYS1101 Discovery Skills in Physics must be taken in Year 1 or Year 2.

LEVEL 2 (Diploma)

1	Foundations of Physics 2		
2	Mathematical Methods in Physics	PHYS2511	20
3	EITHER Discovery Skills in Physics	PHYS2521	20
	OR Laboratory Skills and Practice	PHYS1101	20
	OR Thermal and Condensed Matter Physics	PHYS2551	20
	OR Stars and Galaxies	PHYS2531	20
4	EITHER Thermal and Condensed Matter Physics	PHYS2531	20
	OR Stars and Galaxies	PHYS2541	20
	OR Electronics and Physics Laboratory	PHYS2531	20
	OR One 20 credit module chosen from those offered by another Board of Studies	PHYS2541	20
5-6	Modules to the value of 40 credits chosen from those offered by another Board of Studies	PHYS2561	20

Notes:

The modules PHYS2551 Laboratory Skills and Practice and PHYS2531 Thermal and Condensed Matter Physics must be taken in Year 2 or Year 3.

LEVEL 3 (Degree)

1-2	Foundations of Physics 3		
3	EITHER Laboratory Skills and Practice	PHYS3522	40
	OR Thermal and Condensed Matter Physics	PHYS2551	20
	OR One 20 credit module chosen from the compatible Level 2 and Level 3 physics modules	PHYS2531	20
4	EITHER Thermal and Condensed Matter Physics		
	OR One 20 credit module chosen from the compatible Level 2 and Level 3 physics modules	PHYS2531	20
5-6	Modules to the value of 40 credits chosen from those offered by another Board of Studies		

Notes:

In Years 2 and 3 the modules selected must be from the same two subjects and must the number of credits in physics must be greater than the number of credits in the other subject over these two Years.

The modules PHYS2551 Laboratory Skills and Practice and PHYS2531 Thermal and Condensed Matter Physics must be taken in Year 2 or Year 3.

BSc JOINT HONOURS (CFG0) PHYSICS AND/WITH MATHEMATICS

Programme offered at: Durham.

Mode of study: this programme is available full-time.

LEVEL 1 (Certificate)

1-2	Foundations of Physics 1		
3-4	Core Mathematics A		
5	Core Mathematics B1		
6	EITHER Discovery Skills in Physics	PHYS1122	40
	OR One 20 credit open Level 1 module chosen from those offered by any Board of Studies	MATH1012	40
		MATH1051	20
		PHYS1101	20

Notes:

The module PHYS1101 Discovery Skills in Physics must be taken in Year 1 or Year 2.

LEVEL 2 (Diploma)

1	Foundations of Physics 2		
2	Complex Analysis II		
3	Linear Algebra II		
4	Analysis in Many Variables II		
5-6	EITHER Discovery Skills in Physics	PHYS2511	20
	AND Thermal and Condensed Matter Physics	MATH2011	20
	OR Thermal and Condensed Matter Physics	MATH2021	20
	AND Laboratory Skills and Practice	MATH2031	20
	OR Laboratory Skills and Practice	PHYS1101	20
	AND Electronics and Physics Laboratory	PHYS2531	20
		PHYS2531	20
		PHYS2551	20
		PHYS2551	20
		PHYS2561	20

Notes:

The modules PHYS2551 Laboratory Skills and Practice and PHYS2531 Thermal and Condensed Matter Physics must be taken in Year 2 or Year 3.

LEVEL 3 (Degree)

1-2	Foundations of Physics 3	PHYS3522	40
3	EITHER Laboratory Skills and Practice	PHYS2551	20
	OR Thermal and Condensed Matter Physics	PHYS2531	20
	OR One 20 credit module chosen from the available Level 2 and Level 3 physics modules		
4	EITHER One 20 credit module chosen from the available mathematics modules [for 'Physics and Mathematics']		
	OR One 20 credit module chosen from the available Level 2 and Level 3 physics modules [for 'Physics with Mathematics']		
5-6	Modules to the value of 40 credits taken from the available mathematics modules		

Notes:

In Years 2 and 3 the modules selected must be from the same two subjects and must the number of credits in physics must be greater than the number of credits in the other subject over these two Years.

Some examples of the Physics component to a B.Sc. Joint Honours degree

Physics with X

- Year 2: Foundations of Physics 2
Mathematical Methods in Physics
Laboratory Skills and Practice
- Year 3: Foundations of Physics 3
Laboratory Project
Thermal and Condensed Matter Physics
- Year 2: Foundations of Physics 2
Mathematical Methods in Physics
Stars and Galaxies
Thermal and Condensed Matter Physics
- Year 3: Foundations of Physics 3
Laboratory Skills and Practice
Astrophysics

Physics and X

- Year 2: Foundations of Physics 2
Mathematical Methods in Physics
Laboratory Skills and Practice
- Year 3: Foundations of Physics 3
Key Skills B
- Year 2: Foundations of Physics 2
Mathematical Methods in Physics
- Year 3: Foundations of Physics 3
Theoretical Physics
Laboratory Skills and Practice

X with Physics

- Year 2: Stars and Galaxies
Laboratory Skills and Practice
- Year 3: Astrophysics
Key Skills B
- Year 2: Laboratory Skills and Practice
Electronics and Physics Laboratory
- Year 3: Laboratory Project
Team Project

3.4. M.Sci. Degrees in Natural Sciences

The patterns of study that are available to a student on the M.Sci. Natural Sciences programme (4 years) are as follows:

- (a) an M.Sci. Natural Sciences degree in two or more subjects;
- (b) a Joint Honours degree in two subjects. The possible degree titles within this option are as follows:

- Chemistry and Physics, Mathematics and Physics, Biology and Chemistry or Chemistry and Mathematics.

M.Sci. Natural Sciences degree

This degree allows students to take modules from two or more subjects in a four-year programme. The range of subjects is limited. An M.Sci. in Natural Sciences can be a slight variation from one of the M.Sci. Joint Honours degrees (see below). Alternatively, it could be just one main subject (from a limited choice) with modules from other subjects. In this case your fourth year would have to consist of all six modules from the main subject. It is also possible to undertake a 'triple Honours' degree as an M.Sci. although usually four of the six modules would need to be from one subject.

M.Sci. Joint Honours degree in two subjects

For students following an M.Sci. Joint Honours degree involving Physics modules, there are specific modules required in each year and these are listed in the following guide frameworks (applicable to students currently in Year 1). It is assumed that modules can be taken only if the appropriate prerequisites, corequisites and excluded combinations have been satisfied.

MSci MATHEMATICS AND PHYSICS (FGC0)

Programme offered at: Durham.

Mode of study: this programme is available full-time.

LEVEL 1 (Certificate)

1-2	Core Mathematics A	MATH1012	40
3-4	Foundations of Physics 1	PHYS1122	40
5	Core Mathematics B1	MATH1051	20
6	EITHER Core Mathematics B2 OR Discovery Skills in Physics	MATH1041 PHYS1101	20 20

Notes:

The module PHYS1101 Discovery Skills in Physics must be taken in Year 1 or Year 2.

LEVEL 2 (Diploma)

1	EITHER Complex Analysis II OR Contours and Symmetries II	MATH2011 MATH2111	20 20
2	Linear Algebra II	MATH2021	20
3	Analysis in Many Variables II	MATH2031	20
4	Foundations of Physics 2	PHYS2511	20
5	Thermal and Condensed Matter Physics	PHYS2531	20
6	EITHER Discovery Skills in Physics OR Laboratory Skills and Practice	PHYS1101 PHYS2551	20 20

Notes:

The module PHYS2551 Laboratory Skills and Practice must be taken in Year 2 or Year 3.

Students who fail to achieve the standard required under the Core Regulations for progression to Level 3 of the MSci in Mathematics and Physics but who achieve the standards required for progression to Level 3 of a Bachelors programme may progress to Level 3 of the BSc in Mathematics and Physics or the BSc in Natural Sciences in the Honours or Ordinary stream in accordance with the Core Regulations.

A student who is qualified to progress from Level 2 to Level 3 of the MSci in Mathematics and Physics but wishes to transfer to Level 3 of the BSc in Mathematics and Physics or the BSc in Natural Sciences shall be permitted to do so.

LEVEL 3 (Degree)

1-3	Modules to the value of 60 credits chosen from List A or List B. At least 20 credits must be chosen from List B		
4-5	Foundations of Physics 3	PHYS3522	40
6	EITHER Laboratory Skills and Practice OR Theoretical Physics OR Stars and Galaxies	PHYS2551 PHYS3551 PHYS2541	20 20 20

LIST A

Analysis III	MATH3011	20
Differential Geometry III	MATH3021	20
Operations Research III	MATH3141	20
Dynamical Systems III	MATH3091	20
Mathematics Teaching III	MATH3121	20
Topology III	MATH3281	20
Electromagnetism III	MATH3181	20

LIST B (Lists B1 and B2 will be offered in alternate years)

List B1

Elliptic Functions III	MATH3221	20
Probability III	MATH3211	20
Solitons III	MATH3231	20

List B2

Analytic Number Theory III	MATH3241	20
Continuum Mechanics III	MATH3101	20
Stochastic Processes III	MATH3251	20

Notes:

Students must take either the module PHYS3551 Theoretical Physics in Year 3 or the module PHYS4191 Theoretical Physics 4 in Year 4.

For students who entered Level 1 before October 2002:

Students who at the end of Level 3 have obtained an overall average of 40% for the modules taken in Levels 2 and 3, these modules having been weighted in the proportion 2:3 for Levels 2 and 3, may be allowed to proceed to Level 4; Students whose achievement at the end of Level 3 does not qualify them to proceed to Level 4 may be awarded the degree of BSc in Mathematics and Physics at either Honours or Ordinary level in accordance with the Transitional Undergraduate Regulations for the classification of degrees;

For students who entered Level 1 from October 2002:

Students whose achievement at the end of Level 3 does not qualify them to proceed to Level 4 may be awarded the degree of BSc in Mathematics and Physics at either Honours or Ordinary level in accordance with the Core Regulations for the award of a Bachelors degree.

LEVEL 4 (Degree)

- 1-2 Modules to the value of 40 credits chosen from List C or List D
3-5 EITHER Mathematics Project
AND one 20 credit module chosen from List E
OR Project
6 EITHER Theoretical Physics 4
OR one 20 credit module chosen from List E

MATH4072

PHYS4213
PHYS4191

LIST C (Lists C1 and C2 will be offered in alternate years)

List C1

Elliptic Functions IV
Probability IV
Solitons IV

MATH4151
MATH4131
MATH4121

List C2

Analytic Number Theory IV
Continuum Mechanics IV
Stochastic Processes IV

MATH4111
MATH4081
MATH4091

LIST D

Topology IV
General Relativity IV

LIST E

Advanced Theoretical Physics
Particle Theory
Theoretical Astronomy
Atomic and Optical Physics
Photonics
Astrophysics 4
Condensed Matter Physics 4

MATH4021
MATH4051

PHYS4141
PHYS4181
PHYS4201
PHYS4121
PHYS4171
PHYS4131
PHYS4111

Notes:

For students who entered Level 1 before October 2002:

Those students who do not satisfy the examiners on the basis of their performance in Levels 2, 3 and 4 may be awarded an MSci Pass degree; The Board of Examiners shall consider the position of students who have missed certain papers in their Final Honours Examinations, either through ill health or other sufficient cause. If 75% or more of the evidence, which would have been provided had they completed the examination, is available the Board of Examiners may award a classified MSci degree or an MSci Pass degree as appropriate on the basis of the available evidence. If less than 75% of the evidence is available, subject to the provision of medical evidence or evidence of other good cause, Honours students shall be considered for the award of an Aegrotat degree (or, if they are not deemed worthy of an Honours degree, for an MSci Pass degree). If the Dean of the Faculty, acting on the recommendation of the examiners and in consultation with the Chairman/Chairwoman of the Teaching and Learning Committee, considers that the student would have obtained an Honours standard, an unclassified Aegrotat degree may be awarded. If the Dean of the Faculty, acting on the recommendation of the examiners and in consultation with the Chairman/Chairwoman of the Teaching and Learning Committee, considers that the student would not have reached the standard for the award of an MSci Honours degree, an MSci Pass degree may be awarded.

For students who entered Level 1 from October 2002:

Students whose achievement at the end of Level 4 does not qualify them to be awarded the degree of MSci in Mathematics and Physics may be awarded the degree of BSc in Mathematics and Physics with Honours in accordance with the Core Regulations for the award of a Bachelors degree.

Programme offered at: Durham.

Mode of study: this programme is available full-time.

LEVEL 1 (Certificate)

- 1-2 Foundations of Physics 1
3-4 Core Chemistry 1A
5-6 EITHER Single Mathematics A
AND Single Mathematics B
OR Core Mathematics A

PHYS1122
CHEM1012
MATH1561
MATH1571
MATH1012

LEVEL 2 (Diploma)

1	Foundations of Physics 2	PHYS2511	20
2	Mathematical Methods in Physics	PHYS2521	20
3	Discovery Skills in Physics	PHYS1101	20
4-5	Core Chemistry 2	CHEM2012	40
6	Properties of Molecules	CHEM2041	20

Notes:

Students who fail to achieve the standard required under the Core Regulations for progression to Level 3 of the MSci in Chemistry and Physics but who achieve the standard required for progression to Level 3 of a Bachelors programme may progress to Level 3 of the BSc in Chemistry and Physics or the BSc in Natural Sciences in the Honours or Ordinary stream in accordance with the Core Regulations;

A student who is qualified to progress from Level 2 to Level 3 of the MSci in Chemistry and Physics but wishes to transfer to Level 3 of the BSc in Chemistry and Physics or the BSc in Natural Sciences shall be permitted to do so.

LEVEL 3 (Degree)

1-2	Foundations of Physics 3	PHYS3522	40
3	Laboratory Skills and Practice	PHYS2551	20
4	Chemical Physics 3	CHEM3411	20
5	Computational Chemistry	CHEM2061	20
6	Molecules and their Interactions	CHEM3041	20

Notes:

For students who entered Level 1 before October 2002:

Students who at the end of Level 3 have obtained an overall average of 40% for the modules taken in Levels 2 and 3, these modules having been weighted in the proportion 2:3 for Levels 2 and 3, may be allowed to proceed to Level 4;

Students whose achievement at the end of Level 3 does not qualify them to proceed to Level 4 may be awarded the degree of BSc in Chemistry and Physics at either Honours or Ordinary level in accordance with the Transitional Undergraduate Regulations for the classification of degrees;

For students who entered Level 1 from October 2002:

Students whose achievement at the end of Level 3 does not qualify them to proceed to Level 4 may be awarded the degree of BSc in Chemistry and Physics at either Honours or Ordinary level in accordance with the Core Regulations for the award of a Bachelors degree.

LEVEL 4 (Degree)

EITHER			
1-3	Project	PHYS4213	60
4	One 20 credit module chosen from List B		
5	Chemical Physics 4	CHEM4411	20
6	Chemistry of Materials	CHEM4451	20
OR			
1-3	Chemistry Research Project	CHEM4073	60
4	Research Skills	CHEM4081	20
5-6	Modules to the value of 40 credits chosen from List B (subject to prerequisites)		

LIST B

Atomic and Optical Physics	PHYS4121	20
Photonics	PHYS4171	20
Theoretical Physics 4	PHYS4191	20

Notes:

For students who entered Level 1 before October 2002:

Those students who do not satisfy the examiners on the basis of their performance in Levels 2, 3 and 4 may be awarded an MSci in Chemistry and Physics Pass degree. The Board of Examiners shall consider the position of students who have missed certain papers in their Final Honours Examinations, either through ill health or other sufficient cause. If 75% or more of the evidence, which would have been provided had they completed the examination, is available the Board of Examiners may award a classified MSci in Chemistry and Physics degree or an MSci in Chemistry and Physics Pass degree as appropriate on the basis of the available evidence. If less than 75% of the evidence is available, subject to the provision of medical evidence or evidence of other good cause, Honours students shall be considered for the award of an Aegrotat degree (or, if they are not deemed worthy of an Honours degree, for an MSci in Chemistry and Physics Pass degree). If the Dean of the Faculty, acting on the recommendation of the examiners and in consultation with the Chairman/Chairwoman of the Teaching and Learning Committee, considers that the student would have obtained an Honours standard, an unclassified Aegrotat degree may be awarded. If the Dean of the Faculty, acting on the recommendation of the examiners and in consultation with the Chairman/Chairwoman of the Teaching and Learning Committee, considers that the student would not have reached the standard for the award of an MSci in Chemistry and Physics Honours degree, an MSci in Chemistry and Physics Pass degree may be awarded.

For students who entered Level 1 from October 2002:

Students whose achievement at the end of Level 4 does not qualify them to be awarded the degree of MSci in Chemistry and Physics may be awarded the degree of BSc in Chemistry and Physics with Honours in accordance with the Core Regulations for the award of a Bachelors degree.

3.5. Module Descriptions

PHYS1071 Astronomy for All

Size: 20 credits Type: Elective

Programmes for which this module is compulsory: None

Prerequisites: None

Corequisites: None

Excluded module combinations: Introduction to Astronomy (PHYS1081)

Aims: This elective module aims to give a flavour of key concepts in astronomy without mathematics. It is explicitly designed for non-scientists. The module is for anyone who has ever looked up at the beauty of the night sky and wanted to know more, but was not keen on studying science formally. It enables students to appreciate the drama, evolution and beauty of our current ideas about the Universe and our place in it. Each student will have the opportunity to view the night sky for themselves with telescopes or binoculars.

Learning outcomes: Students will have an appreciation of key features and developments in Ancient, Mediaeval, Renaissance and Post-Renaissance Astronomy. They will have a qualitative understanding of the life-cycle of stars and of the origin and future of the Universe. They will know the positions in the night sky of key objects and have a basic knowledge of celestial motions and phenomena. Students will know how to write a clear essay on a given topic to a detailed specification, including appropriate style, structure and bibliography.

Summative assessment: One 2-hour written examination (70%), one essay assignment (30%)

Formative assessment: Web-based multiple-choice tests

Quality assurance of assessment: Anonymous marking according to a template for the written examination. Use of a mark proforma for the essay.

SLAT hours:

Lectures 36
Student preparation & reading time associated with contact hours listed above; formative and summative coursework, general background reading; revision for written examinations, etc.:

SLAT totals: 164
200

Content and Teaching Methods

Astronomy Prof F.R. Stephenson
Through the Ages Dr J.M. Steele

9 lectures in Michaelmas Term

Syllabus: The Ancient Near East: Astronomy and astrology; observational and non-mathematical astronomy; mathematical astronomy and the development of the zodiac. Ancient Greece: Greek cosmology; the size and shape of the Earth. Hipparchus, Ptolemy and the heliocentric system. China: Observational astronomy; 'official' nature of astronomy in China; the calendar and mathematical astronomy. Medieval Astronomy: Islamic Astronomy. Regiomontanus. Renaissance Astronomy: Copernicus. Tycho; Kepler. Post-Renaissance Astronomy: Galileo. Newton; the telescope. Historiography: Problems, methods and motivations in the history of astronomy. modern uses of early astronomical records.

Textbooks:

Cambridge Illustrated History of Astronomy,
M. Hoskin (CUP)

Astronomy Before the Telescope,
C. Walker (British Museum)

Early Physics and Astronomy: A Brief Introduction,
O. Pedersen (CUP)

Science and Civilisation in China (Vol. 3),
J. Needham (CUP)

The Evolving Universe

18 lectures in Michaelmas and Epiphany Terms

Syllabus: Birth, life and death of stars: formation of stars and planets, how stars shine, end states of stars – supernovae, black holes, neutron stars and white dwarfs. Birth, life and death of the Universe: galaxies, quasars, dark matter, an expanding Universe, age of the Universe, hot big bang origin, end state of the Universe – recollapse or infinite expansion.

Textbooks:

In Quest of the Universe,
K.F. Kuhn and T. Koupelis (Jones & Bartlett, 3rd Ed.)

A User's Guide to the Night Sky

6 lectures + 3 optional evening observations in Epiphany Term

Syllabus: Positions in the Sky: the celestial sphere, coordinate systems, diurnal motion, the 'fixed' stars and the key constellations, the stellar magnitude system. Annual Motions: vernal equinox, summer solstice, autumnal equinox, winter solstice, the Sun's apparent motion, mean solar time, sidereal time. Near Earth Phenomena: aurora, meteors, artificial satellites including the ISS and iridium flashes. The Moon.

motion, phases, lunar occultations, eclipses. Planetary Motions: the apparent motions as seen from the Earth, inferior and superior planets, comets, minor planets. The stars and beyond: key bright stars (Sirius, Canopus, Alpha Cen, Arcturus, Vega, Capella, Betelgeuse, Altair), variable stars (e.g. Algol, delta Cepheid, Mira), star clusters (Pleiades, Hyades, Beehive), nebulae (Orion, Andromeda), the Milky Way, the Magellanic Clouds, galaxies and beyond.

Textbooks:

In Quest of the Universe,
K.F. Kuhn and T. Koupelis (Jones & Bartlett, 3rd Ed., Chapters 1–3, 6)

Essay

Students choose one of two essay titles relating to two of the module's sections: 'The Evolving Universe' and 'Astronomy Through the Ages'. The essay is to be of 2000 words in length, and is to be submitted at the start of the Easter Term. Each essay question has a detailed specification of the issues that should be covered and the submitted work is marked by template, with comments and marks recorded on a mark pro forma. Essays and associated pro formas are returned at the end of Easter Term.

Web-based multiple choice tests

After each lecture, a short multiple choice test is made available on DUO. Students are expected to complete each test before the following lecture so that misunderstandings can be identified and addressed. The tests are marked automatically so feedback is immediate.

PHYS1081 Introduction to Astronomy

Size: 20 credits

Type: Elective

Programmes for which this module is compulsory: None

Prerequisites: A Level Physics and A Level or AS Level Mathematics

Corequisites: None

Excluded module combinations: Astronomy for All (PHYS1071)

Aims: This module is designed to introduce students to the language and physical concepts of astronomy. Students will need to work with simple algebraic equations and basic calculus. The module provides students with a wide-ranging background in modern astronomy and astrophysics together with familiarity with the night sky. The course takes a more detailed look at cosmology and the search for extra-solar planetary systems and life. Each student will have the opportunity to view the night sky for themselves with telescopes or binoculars.

Learning outcomes: Students will be able to describe the basic structure and content of the solar system. They will know, and be able to apply, the fundamental principles of optical telescopes and of other types of telescope. They will be aware of the challenges surrounding the detection of extra-solar planets and of the physical requirements for extra-terrestrial life. They will know the positions in the night sky of key objects and have a basic knowledge of celestial motions and phenomena. They will be familiar with the Big Bang theory of the creation and expansion of the Universe. Students will be able to apply the basic principles of physics and astronomy to the solution of a range of problems. They will know how to produce a well-structured solution, with clearly-explained reasoning and appropriate presentation.

Summative assessment: One 2-hour written examination (90%), problem exercises (10%)

Formative assessment: One multiple choice test

Quality assurance of assessment: Anonymous marking according to a template for the written examination. Marking to a template, objective marking and the use of statistical moderation of marks for the problem exercises.

SLAT hours:	hours
Lectures	43
Student preparation & reading time associated with contact hours listed above; formative and summative coursework, general background reading; revision for written examinations, etc.:	164
SLAT totals:	200

Content and Teaching Methods

Overview of Astronomy

Dr P.M. Chadwick

20 lectures in Michaelmas and Epiphany Terms

Syllabus: Wandering 'stars' – planetary motion, Kepler's laws and gravity. The Grand Tour – the terrestrial planets, the gas giants, comets and asteroids. Cosmogony. The Stars – measuring the stars, stellar classification, how the stars shine. The Sun as a star. Making sense of the 'zoo' – stellar evolution, star clusters and ages. Stellar deaths – supernovae, white dwarfs, neutron stars and black holes. The Milky Way – the interstellar medium, mapping the Galaxy. The Milky Way's companions. Galaxies – the Hubble sequence, spiral and elliptical galaxies, measuring distances. Clusters and superclusters. Colliding galaxies. Active galaxies and quasars. Oh dear, where can the matter be? – weighing galaxies. The expanding universe. Tools of the Trade – telescope fundamentals, diffraction, resolution, light gathering power, detectors. Using the spectrum – radio, optical, X-ray and gamma ray telescopes. Neutrino astronomy.

Textbooks:

Astronomy: The Evolving Universe, R
M. Zeilik (CUP, 9th Ed.)

Universe, R
R. Freedman and W. Kaufmann (Freeman, 6th Ed.)

Introductory Astronomy and Astrophysics, B
M. Zeilik and S.A. Gregory (Harcourt)

Astrophysics, B
C. Bishop (Murray)

Astrobiology

Dr S.L. Morris

5 lectures in Michaelmas Term

Syllabus: To investigate the technical challenges to be faced in detecting planetary systems around stars other than the Sun and the basic physics which determines whether conditions will be suitable for life to form on such planets.

Textbooks:

An Introduction to Astrobiology, B
I. Gilmour and M.A. Sephton, Eds. (CUP)

Extrasolar planets: The Search for New Worlds, B
S.G. Clark (Wiley)

Life in the Universe, B
J.O. Bennett, S. Shostak and B. Jakosky (Addison-Wesley, 2003)

A User's Guide to the Night Sky

Dr J.R. Lucey

6 lectures + 3 optional evening observations in Epiphany Term

Syllabus: Positions in the Sky: the celestial sphere,

coordinate systems, diurnal motion, the 'fixed' stars and the key constellations, the stellar magnitude system. Annual Motions: vernal equinox, summer solstice, autumnal equinox, winter solstice, the Sun's apparent motion, mean solar time, sidereal time. Near Earth Phenomena: aurora, meteors, artificial satellites including the ISS and iridium flashes. The Moon: motion, phases, lunar occultations, eclipses. Planetary Motions: the apparent motions as seen from the Earth, inferior and superior planets, comets, minor planets. The stars and beyond: key bright stars (Sirius, Canopus, Alpha Cen, Arcturus, Vega, Capella, Betelgeuse, Altair), variable stars (e.g. Algol, delta Cepheid, Mira), star clusters (Pleiades, Hyades, Beehive), nebulae (Orion, Andromeda), the Milky Way, the Magellanic Clouds, galaxies and beyond.

Textbooks:

Universe, B
R. Freedman and W. Kaufmann (Freeman, 6th Ed.)

In Quest of the Universe, B
K.F. Kuhn and T. Koupelis (Jones & Bartlett, 3rd Ed., Chapters 1–3, 6)

Cosmic History

Prof C.S. Frenk

9 lectures in Epiphany and Easter Terms

Syllabus: The expanding Universe, the Big Bang, dark matter.

Textbooks:

Quarks, Leptons and the Big Bang, B
J. Allday (IOP Publishing)

An Introduction to Modern Cosmology, B
A. Liddle (Wiley)

The First Three Minutes, B
S. Weinberg (HarperCollins)

Problem exercises

We are concerned that you should learn how to apply the basic principles of physics to the solution of a range of problems. Problem solving is a transferable skill that will be of great benefit to you in a wide variety of circumstances. To help you develop these skills, each week a number of homework problems will be set, related to the course work. As part of the course requirements, you are expected to attempt these problems and to submit solutions in due time. The marks obtained for this assignment contribute to the total mark for the module. This is a **compulsory** part of your degree course and forms one of the components used to fulfil the requirements to 'Keep your work for any Term'. If you are unable to submit your work for any Term, you must contact the Physics Department (see reason, you must contact the Physics Department (see 'Deadlines for Submitted Course Work' on page 8). A few problems for private study will also be issued every week.

The problem exercises will be set during lectures. The number of problems set for each course will vary from week to week, according to a schedule displayed on the notice board. Some lecturers will select the homework questions from a long problems sheet, which you will be given in due course.

The solutions must be handed in by the following Monday at 2.15 p.m. Scripts submitted after the deadline will be corrected but, in agreement with University regulations, will not be awarded any mark. Answers must be deposited each week before the deadline in the Level 1 posting box, near Room 54 on the ground floor. The scripts are marked by postgraduate students in Physics, following a marking scheme decided by the lecturer. Marked scripts can normally be collected after 2.15 p.m. on the following Monday from the trays near Room 54. The solutions will be displayed in the cabinets in the James Knott Room and on DUO, and you should consult these to resolve points of misunderstanding. Students who have difficulties with particular problems should consult the lecturer of the course involved.

The Level 1 Problems Organiser is Dr Stuart Brand (Room 147).

PHYS1101 Discovery Skills in Physics

Size: 20 credits

Type: Open

Programmes for which this module is compulsory: BSc Physics, BSc Physics and Astronomy, BSc Joint Honours Physics and/or with X, BSc Joint Honours X with Astronomy, MSci Physics, MSci Physics and Astronomy, MSci Theoretical Physics, MSci Chemistry and Physics, MSci Mathematics and Physics

Prerequisites: A Level Physics and A Level or AS Level Mathematics

Corequisites: Foundations of Physics 1 (PHYS1122) OR Fundamental Physics A (PHYS1111) AND Single Mathematics A (MATH1561) and Single Mathematics B (MATH1571) OR Core Mathematics A (MATH1012) OR Mathematics for Engineers and Scientists (MATH1551)

Excluded module combinations: None

Aims: This module is designed primarily for students studying Department of Physics or Natural Science degrees. It provides the basic experimental and key skills required by physicists, and should be taken by all students intending to study practical physics beyond Level 1. Using experiments in physics as the vehicle, the module provides a structured introduction to laboratory skills development, with particular emphasis on measurement uncertainty and written communication skills.

Learning outcomes: Having studied this module students will have gained a working knowledge of the treatment of errors in laboratory work. They will be able to use computer software to write reports and to analyse data. They will know, and be able to apply, the constituents of a scientific style of writing. They will be aware of a variety of reference sources and know how to use them effectively. Students will have acquired practical competence and accuracy in carrying out experimental procedures including measurement, use of apparatus and recording of results. They will be able to write a clear scientific report including theoretical background, experimental description, presentation and analysis of results, and interpretation and evaluation.

Summative assessment: One written report (25%), two extended written reports (70%), problem exercises (5%)

Formative assessment: Formative assessment of laboratory record by laboratory staff.

Quality assurance of assessment: Marking to a template, objective marking and the use of statistical moderation of marks for the problem exercises. Use of a mark proforma and marking to a template for the practical work and written reports.

SLAT hours:	hours
Lectures	5
Practicals	54
Information Literacy Session	3
Student preparation & reading time associated with contact hours listed above; formative and summative coursework, general background reading; revision for written examinations, etc.:	138
SLAT totals:	200

Content and Teaching Methods

Introduction and Safety Dr I.G. Hughes

1 lecture in Michaelmas Term

The laboratory arrangements will be discussed and important safety information will be given. Attendance is compulsory.

Errors Lectures Dr T.P.A. Hase

3 lectures in Michaelmas Term

Syllabus: Errors in laboratory work: systematic and random errors, combination of errors, common sense in errors.

Skills Sessions Dr I.G. Hughes and others

4 three-hour sessions in Michaelmas Term

Syllabus: Safety in the laboratory. Introduction to instrumentation: oscilloscopes, function generators, circuits. Verifying physical laws, measurement technique, statistics of measurement, dimensional analysis, graph plotting. Applications of material from the errors lectures. Information literacy, including introduction to sources of reference material.

Textbooks:

<i>Practical Physics,</i> G.L. Squires (CUP, 2001)	B
<i>Physics by Experiment: A Practical Handbook,</i> S. Freake (OUP, 2001)	B

Report Writing

1 lecture in Michaelmas Term

Dr G.H. Cross

Syllabus: Developing a scientific style of writing.

Computing Skills

1 three-hour session in Michaelmas Term
Syllabus: Using PC software for report writing and data analysis.

Discovery Experiments

Dr I.G. Hughes
and others

4 three-hour sessions in Michaelmas Term

Syllabus: Introductory experiments in physics (one per week) using structured scripts, with students working in pairs. One experiment forms the basis for a summatively-assessed written report. One of the sessions takes the form of an Enterprise Seminar.

Full Experiments

Dr I.G. Hughes
and others

8 three-hour sessions in Epiphany Term

Syllabus: Full experiments in physics (one per week), with students working in pairs. Two experiments form the bases for summatively-assessed extended written reports.

Laboratory Information

Students are required to attend one 3-hour laboratory session every week. The laboratory sessions are 2.15 p.m. to 5.15 p.m. on Monday, Tuesday, Thursday and Friday. Students must sign the attendance list at the start of each session.

At the introductory lecture you will be assigned a laboratory session and hear a talk detailing the management of the laboratories and safety issues.

Each student must buy his/her own lab book, available from the Student Shop in Dunelm House, or from large stationers. Laboratory scripts will be provided and background material is available on DUO.

Problem exercises

We are concerned that you should learn how to apply the basic principles of physics to the solution of a range of problems. Problem solving is a transferable skill that will be of great benefit to you in a wide variety of circumstances. To help you develop these skills, a number of homework problems will be set, related to the errors lectures. As part of the course requirements, you are expected to attempt these problems and to submit solutions in due time. The marks obtained for this assignment contribute to the total mark for the module. This is a compulsory part of your degree course and forms one of the components used to fulfil the requirements to 'Keep Term'. If you are unable to submit your work for any reason, you must contact the Physics Department (see 'Deadlines for Submitted Course Work' on page 8). A few problems for private study may also be issued.

The problem exercises will be set during the errors lectures, according to a schedule displayed on the

notice board. The solutions must be handed in by the following Monday at 2.15 p.m. Scripts submitted after the deadline will be corrected but, in agreement with University regulations, will not be awarded any mark. Answers must be deposited each week before the deadline in the Level 1 posting box, near Room 54 on the ground floor. The scripts are marked by postgraduate students in Physics, following a marking scheme decided by the lecturer. Marked scripts can normally be collected after 2.15 p.m. on the following Monday from the trays near Room 54. The solutions will be displayed in the cabinets in the James Knott Room and on DUO, and you should consult these to resolve points of misunderstanding. Students who have difficulties with particular problems should consult the lecturer of the course involved.

The Level 1 Problems Organiser is Dr Stuart Brand (Room 147).

PHYS1111 Fundamental Physics A

Size: 20 credits

Type: Open

Programmes for which this module is compulsory: None

Prerequisites: A Level Physics and A Level or AS Level Mathematics

Corequisites: Single Mathematics A (MATH1561) and Single Mathematics B (MATH1571) OR Core Mathematics A (MATH1012) OR Mathematics for Engineers and Scientists (MATH1551)

Excluded module combinations: Foundations of Physics 1 (PHYS1122), Fundamental Physics B (PHYS1131)

Aims: This module introduces basic concepts in Newtonian mechanics, special relativity, phases of matter, optics, atomic, nuclear and particle physics. It is a subset of the double module Foundations of Physics 1, excluding the courses on wave phenomena, electricity and magnetism, and quantum mechanics. For this reason it is not sufficient for progression to Level 2 physics modules [with certain exceptions, see diagram on page 16]. The module provides students with practice in the informal discussion of scientific ideas within a small group.

Learning outcomes: Having studied this module students will have gained an introductory knowledge of Newtonian mechanics and applications to basic physical problems familiar from the everyday world, such as movement under constant acceleration, rotating wheels and pulleys and the motion of the planets. They will understand the concepts of inertial frames of reference and the universality of the speed of light, and will have a basic understanding of relativistic effects and Lorentz invariants. They will have an understanding of the structure of an atom in terms of a nucleus and electrons, and of a nucleus in terms of protons and neutrons; knowledge of the parameters used to describe atoms and nuclei, an ability to explain their properties in terms of simple physical models, and an appreciation of the applications of nuclear physics. They will have knowledge of the contemporary picture of elementary particle physics and the characteristics of the four fundamental interactions. They will be familiar with the nature and basic properties of solids, liquids, gases, and plasmas, and with simple microscopic models to describe the behaviour of the different phases of matter. They will have knowledge of the principles that describe the propagation of light in free space, dielectric materials, and lens/mirror systems, will be familiar with the concepts of diffraction, interference and polarization, and will have the ability to carry out calculations to determine the properties of simple optical systems.

In addition to the acquisition of subject knowledge, students will have developed problem-solving skills requiring the application of the basic principles of

physics. They will know how to produce a well-structured solution, with clearly-explained reasoning and appropriate presentation.

Summative assessment: One 3-hour written examination (85%), problem exercises (15%)

Formative assessment: One 1½-hour collection examination

Quality assurance of assessment: Anonymous marking according to a template for the written examination. Marking to a template, objective marking and the use of statistical moderation of marks for the problem exercises.

SLAT hours:	hours
Lectures	60
Tutorials	10
Student preparation & reading time associated with contact hours listed above; formative and summative coursework, general background reading; revision for written examinations, etc.:	130
SLAT totals:	200

Content and Teaching Methods

Introduction to Classical Mechanics

Dr A. Signer

16 lectures in Michaelmas Term

Syllabus: Velocity, acceleration, Newton's Laws, conservation of momentum and energy, friction, angular motion, centrifugal force, Coriolis force, angular momentum and torques, gyroscopes, central forces, Newton's Law of Gravity, satellite launching, Kepler's Laws, planetary orbits.

Textbooks:

<i>Physics for Scientists and Engineers: Extended Version</i> , P.A. Tipler and G.P. Mosca (Freeman)	E
<i>Physics</i> , R. Resnick, D. Halliday and K.S. Krane (Wiley)	B
<i>University Physics</i> , H.D. Young and R.A. Freedman (Addison-Wesley, 10th Ed.)	B

Introduction to Special Relativity

Dr T.P.A. Hase

8 lectures in Michaelmas Term

Syllabus: Motion as seen by different observers. Setting up inertial frames of reference. The Michelson-Morley experiment. The universality of the speed of light. Lightning striking twice: the meaning of simultaneity. How time can get longer and lengths shorten, depending on speed. Ageing on the move: the twin

paradox. How elementary particles can test these predictions to enormous precision. How co-ordinates for one observer are related to those for another, and how speeds add up. Some things never change: Lorentz invariants. Einstein's famous energy and mass relation, relativistic billiards and collisions: energy and momentum of elementary particles. Looking forward to General relativity; what happens in accelerating frames?

Textbooks:

<i>Physics for Scientists and Engineers: Extended Version</i> , P.A. Tipler and G.P. Mosca (Freeman)	E
<i>The Time and Space of Uncle Albert</i> , R. Stannard (Faber & Faber)	R

Introduction to Optics

Dr G.D. Love

6 lectures in Michaelmas Term

Syllabus: Reflection and refraction, Snell's Law and refractive index. Ray tracing. Optical systems with one or more lenses. Photography. The limits of imaging. Diffraction and interference. Polarisation.

Textbooks:

<i>Physics for Scientists and Engineers: Extended Version</i> , P.A. Tipler and G.P. Mosca (Freeman)	E
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Phases of Matter

Dr L.-O. Pålsson

15 lectures in Epiphany Term

Syllabus: Atoms: The physical properties of atoms, mass size and density of atoms. Interatomic Interactions: Description of interatomic forces, interatomic potentials, types of bonding. Temperature and Thermodynamics: Relation between thermodynamics and thermal properties of matter, zero and first laws of thermodynamics, kinetic theory of gases. Properties of Gases: Thermal and mechanical properties of gases, path, thermal conductivity. Properties of Solids: Structure of solids, heat capacity, mechanical properties: compressibility, Young's modulus, tensile strength. Properties of Liquids: Mechanical and thermal properties, viscosity. Properties of Plasmas: Origin of plasmas, properties, influence of plasma on the solar system, applications of plasma. Electronic Properties of Matter: Relation between electrical and other properties, insulators, semiconductors, conductors, superconductivity. Quantum Effects: A look at unusual properties of matter based on quantum mechanics, new materials systems, atom engineering, future developments.

Textbooks:

<i>Physics for Scientists and Engineers: Extended Version</i> , P.A. Tipler and G.P. Mosca (Freeman)	E
<i>The Elements of Physics</i> , I.S. Grant and W.R. Phillips (OUP)	R

<i>Three Phases of Matter</i> , A.J. Walton (OUP)	B
<i>Gases, Liquids and Solids</i> , D. Tabor (CUP)	B
<i>The Physics of Solids</i> , R. Turton (OUP)	B
<i>The Science and Engineering of Materials</i> , D.R. Askeland (PWS Publishing)	B

Atoms, Nuclei and Particles Prof D.R. Flower

15 lectures in Epiphany and Easter Terms

Syllabus: Structure of matter. Atoms, nuclei, quarks and leptons. The fundamental forces of nature. The Standard Model of particle physics. Rutherford Scattering, Bohr model, Sommerfeld model, Zeeman effect, electron spin, Stern-Gerlach experiment, Periodic Table, Pauli Exclusion Principle. Nuclear shell model, magic numbers, magnetic moments, nuclear magnetic resonance, fission, fusion, α -decay, β -decay and the neutrino.

Textbooks:

<i>Physics for Scientists and Engineers: Extended Version</i> , P.A. Tipler and G.P. Mosca (Freeman)	E
<i>The Discovery of Subatomic Particles</i> , S. Weinberg (Penguin)	R

Tutorials

Personal tutors

One 1-hour tutorial per fortnight in Michaelmas, Epiphany and Easter Terms

Each student is assigned to a member of staff who acts as the student's academic tutor for the year. As part of a group of typically five or six students, you will meet with your tutor regularly from the start of the year and will discuss various topics in physics. Tutors will use the weekly problems as a basis for these discussions and will try to ensure that you gain a secure foundation, and will also give advice particularly in Mathematics. Tutors will also give advice on study skills, the transition from school to university, problem-solving techniques and revision skills. The problem-solving techniques and revision skills. The tutorial provides an excellent forum for you to raise issues of interest or difficulty and should not deteriorate into a monologue by the tutor. **The more preparation and effort you put into the tutorial, the more you will get out of it.**

A notice will be displayed at the start of the Michaelmas Term listing tutors and tutees. The first tutorial will take place early in the term.

Problem exercises

We are concerned that you should learn how to apply the basic principles of physics to the solution of a range of problems. Problem solving is a transferable skill that

will be of great benefit to you in a wide variety of circumstances. To help you develop these skills, each week a number of homework problems will be set, related to the course work. As part of the course requirements, you are expected to attempt these problems and to submit solutions in due time. The marks obtained for this assignment contribute to the total mark for the module. This is a **compulsory** part of your degree course and forms one of the components used to fulfil the requirements to 'Keep Term'. If you are unable to submit your work for any reason, you must contact the Physics Department (see 'Deadlines for Submitted Course Work' on page 8). A few problems for private study or discussion during tutorials will also be issued every week.

The problem exercises will be set during lectures. The number of problems set for each course will vary from week to week, according to a schedule displayed on the notice board. Some lecturers will select the homework questions from a long problems sheet, which you will be given in due course. Spare copies of the problems sheets can be obtained from your tutor.

The solutions must be handed in by the following Monday at 2.15 p.m. Scripts submitted after the deadline will be corrected but, in agreement with University regulations, will not be awarded any mark. Answers must be deposited each week before the deadline in the Level 1 posting box, near Room 54 on the ground floor. The scripts are marked by postgraduate students in Physics, following a marking scheme decided by the lecturer. Emphasis is placed on producing a well-structured solution, with clearly-explained reasoning. Where numerical results are required, credit will be given for using correct units and an appropriate number of significant figures. Marked scripts can normally be collected after 2.15 p.m. on the following Monday from the trays near Room 54. The solutions will be displayed in the cabinets in the James Knott Room and on DUO, and you should consult these to resolve points of misunderstanding. Your Physics tutor will also have a complete set of solutions. Students who have difficulties with particular problems should consult the lecturer of the course involved or raise the matter at the fortnightly tutorial.

The Level 1 Problems Organiser is Dr Stuart Brand (Room 147).

Self-study

In order to develop your skills in independent learning, from time to time lecturers will set certain topics for self-study. These topics will take the form of specific sections of the course textbook or other clearly-defined resources. This is an integral and compulsory part of the course, and topics set for self-study will be assessed through problem exercises and the examinations.

Maths modelling classes

During Michaelmas Term, diagnostic tests in mathematics will be available via DUO, and you are encouraged to attempt these. They should take only a few minutes to complete, and are designed to help you to identify areas of mathematics and mathematical modelling in which you might benefit from more practice. Weekly classes will review topics from school mathematics, with emphasis on the mathematical modelling of physics problems, and links will be identified between the topics covered and specific forthcoming physics lectures. Attendance at these revision-type classes is voluntary, but you are strongly advised to attempt the DUO-based tests and to attend the appropriate class if you have difficulties.

PHYS1122 Foundations of Physics 1

Size: 40 credits

Type: Open

Programmes for which this module is compulsory: BSc Physics, BSc Physics and Astronomy, BSc Joint Honours Physics and/or with X, MSci Physics, MSci Physics and Astronomy, MSci Theoretical Physics, MSci Chemistry and Physics, MSci Mathematics and Physics

Prerequisites: A Level Physics and A Level or AS Level Mathematics

Corequisites: Single Mathematics A (MATH1561) and Single Mathematics B (MATH1571) OR Core Mathematics A (MATH1012) OR Mathematics for Engineers and Scientists (MATH1551)

Excluded module combinations: Fundamental Physics A (PHYS1111), Fundamental Physics B (PHYS1131)

Aims: This module is designed primarily for students studying Department of Physics or Natural Science degrees. It provides the minimum core physics required for progression to Level 2 physics modules and should be taken by all students intending to study physics beyond Level 1 [with certain exceptions, see diagram on page 16]. It provides courses in classical aspects of wave phenomena and electromagnetism, and introduces basic concepts in Newtonian mechanics, quantum mechanics, special relativity, phases of matter, optics, atomic, nuclear and particle physics. The module provides students with practice in the informal discussion of scientific ideas within a small group.

Learning outcomes: Having studied this module students will have gained an introductory knowledge of Newtonian mechanics and applications to basic physical problems familiar from the everyday world, such as movement under constant acceleration, rotating wheels and pulleys and the motion of the planets. They will understand the concepts of inertial frames of reference and the universality of the speed of light, and will have a basic understanding of relativistic effects and Lorentz invariants. They will have knowledge of the physics of vibrations and waves in many different linear systems and of optical wave phenomena including light propagation, diffraction and interference. They will have a firm grounding in the classical aspects of electromagnetism, including the central ideas of electrostatics, magnetostatics and time variations. They will understand the fundamental importance of quantum mechanics to modern physics and will be able to perform simple quantum mechanical calculations. They will have an understanding of the structure of an atom in terms of a nucleus and electrons, and of a nucleus in terms of protons and neutrons; knowledge of the parameters used to describe atoms and nuclei, an ability to explain their properties in terms of simple physical models, and an appreciation of the applications of nuclear physics. They will have knowledge of the contemporary picture of elementary particle physics

and the characteristics of the four fundamental interactions. They will be familiar with the nature and basic properties of solids, liquids, gases, and plasmas, and with simple microscopic models to describe the behaviour of the different phases of matter. They will have knowledge of the principles that describe the propagation of light in free space, dielectric materials, and lens/mirror systems, will be familiar with the concepts of diffraction, interference and polarization, and will have the ability to carry out calculations to determine the properties of simple optical systems.

In addition to the acquisition of subject knowledge, students will have developed problem-solving skills requiring the application of the basic principles of physics. They will know how to produce a well-structured solution, with clearly-explained reasoning and appropriate presentation.

Summative assessment: Two 3-hour written examinations (85%), problem exercises (15%)

Formative assessment: One 3-hour collection examination

Quality assurance of assessment: Anonymous marking according to a template for the written examinations. Marking to a template, objective marking and the use of statistical moderation of marks for the problem exercises.

	hours
SLAT hours:	120
Lectures	20
Tutorials	
Student preparation & reading time associated with contact hours listed above; formative and summative coursework, general background reading; revision for written examinations, etc.:	260
SLAT totals:	400

Content and Teaching Methods

Dr A. Signer

Introduction to Classical Mechanics

16 lectures in Michaelmas Term

Syllabus: Velocity, acceleration, Newton's Laws, conservation of momentum and energy, friction, angular motion, centrifugal force, Coriolis force, angular momentum and torques, gyroscopes, central forces, Newton's Law of Gravity, satellite launching, Kepler's Laws, planetary orbits.

Textbooks:

Physics for Scientists and Engineers: Extended Version, E
P.A. Tipler and G.P. Mosca (Freeman)
Physics, B
R. Resnick, D. Halliday and K.S. Krane (Wiley)

will be of great benefit to you in a wide variety of circumstances. To help you develop these skills, each week a number of homework problems will be set, related to the course work. As part of the course requirements, you are expected to attempt these problems and to submit solutions in due time. The marks obtained for this assignment contribute to the total mark for the module. This is a **compulsory** part of your degree course and forms one of the components used to fulfil the requirements to 'Keep Term'. If you are unable to submit your work for any reason, you must contact the Physics Department (see 'Deadlines for Submitted Course Work' on page 8). A few problems for private study or discussion during tutorials will also be issued every week.

The problem exercises will be set during lectures. The number of problems set for each course will vary from week to week, according to a schedule displayed on the notice board. Some lecturers will select the homework questions from a long problems sheet, which you will be given in due course. Spare copies of the problems sheets can be obtained from your tutor.

The solutions must be handed in by the following Monday at 2.15 p.m. Scripts submitted after the deadline will be corrected but, in agreement with University regulations, will not be awarded any mark. Answers must be deposited each week before the deadline in the Level 1 posting box, near Room 54 on the ground floor. The scripts are marked by postgraduate students in Physics, following a marking scheme decided by the lecturer. Emphasis is placed on producing a well-structured solution, with clearly-explained reasoning. Where numerical results are required, credit will be given for using correct units and an appropriate number of significant figures. Marked scripts can normally be collected after 2.15 p.m. on the following Monday from the trays near Room 54. The solutions will be displayed in the cabinets in the James Knott Room and on DUO, and you should consult these to resolve points of misunderstanding. Your Physics tutor will also have a complete set of solutions. Students who have difficulties with particular problems should consult the lecturer of the course involved or raise the matter at the weekly tutorial.

The Level 1 Problems Organiser is Dr Stuart Brand (Room 147).

Self-study

In order to develop your skills in independent learning, from time to time lecturers will set certain topics for self-study. These topics will take the form of specific sections of the course textbook or other clearly-defined resources. This is an integral and compulsory part of the course, and topics set for self-study will be assessed through problem exercises and the examinations.

Maths modelling classes

During Michaelmas Term, diagnostic tests in mathematics will be available via DUO, and you are encouraged to attempt these. They should take only a few minutes to complete, and are designed to help you to identify areas of mathematics and mathematical modelling in which you might benefit from more practice. Weekly classes will review topics from school mathematics, with emphasis on the mathematical modelling of physics problems, and links will be identified between the topics covered and specific forthcoming physics lectures. Attendance at these revision-type classes is voluntary, but you are strongly advised to attempt the DUO-based tests and to attend the appropriate class if you have difficulties.

PHYS1131 Fundamental Physics B

Size: 20 credits

Type: Open

Programmes for which this module is compulsory: None

Prerequisites: A Level Physics and A Level or AS Level Mathematics

Corequisites: Single Mathematics A (MATH1561) and Single Mathematics B (MATH1571) OR Core Mathematics A (MATH1012) OR Mathematics for Engineers and Scientists (MATH1551)

Excluded module combinations: Fundamental Physics A (PHYS1111), Foundations of Physics 1 (PHYS1122)

Aims: This module introduces basic concepts in wave phenomena, electricity and magnetism, and quantum mechanics. It is a subset of the double module Foundations of Physics 1, excluding the courses on Newtonian mechanics, special relativity, phases of matter, optics, atomic, nuclear and particle physics. For this reason it is not sufficient for progression to Level 2 physics modules. The module provides students with practice in the informal discussion of scientific ideas within a small group.

Learning outcomes: Having studied this module students will have knowledge of the physics of vibrations and waves in many different linear systems and of optical wave phenomena including light propagation, diffraction and interference. They will have a firm grounding in the classical aspects of electromagnetism, including the central ideas of electrostatics, magnetostatics and time variations. They will understand the fundamental importance of quantum mechanics to modern physics and will be able to perform simple quantum mechanical calculations.

In addition to the acquisition of subject knowledge, students will have developed problem-solving skills requiring the application of the basic principles of physics. They will know how to produce a well-structured solution, with clearly-explained reasoning and appropriate presentation.

Summative assessment: One 3-hour written examination (85%), problem exercises (15%)

Formative assessment: One 1½-hour collection examination

Quality assurance of assessment: Anonymous marking according to a template for the written examination. Marking to a template, objective marking and the use of statistical moderation of marks for the problem exercises.

SLAT hours:	hours
Lectures	60
Tutorials	10

Student preparation & reading time associated with contact hours listed above; formative and summative coursework, general background reading; revision for written examinations, etc.:	130
SLAT totals:	200

Content and Teaching Methods

Wave Phenomena

Dr P. Richardson

21 lectures in Michaelmas Term

Syllabus: Introduction to vibrations. Energy in SHM. Simple harmonic motion of mechanical, electrical and atomic oscillators. Damped harmonic motion. Introduction of the Q value, forced oscillations and resonance. Chaos, period doubling, attractors and the Mandelbrot set. Introduction to transverse and longitudinal waves. Analysis of the wave equation. Properties of harmonic waves including sound waves, intensity and loudness. The Doppler effect. Superposition and interference of harmonic waves, including boundary conditions. Interference and beats. Standing waves. Waves in a dispersive medium, phase and group velocities. Pulses in a non-linear medium, Solitons. The nature and properties of light. The speed of light. The propagation of light, Huygens' principle and single slit diffraction and two slit interference. Applications of dispersion: fibre optics, prisms and rainbows.

Textbooks:

Physics for Scientists and Engineers: Extended Version, P.A. Tipler and G.P. Mosca (Freeman)	E
Physics of Vibrations and Waves, H.J. Pain (Wiley, 5th Ed.)	B
Vibrations and Waves, A.P. French (Chapman & Hall)	B
Vibrations and Waves, W. Gough et al. (Prentice Hall, 2nd Ed.)	B
Optics, E. Hecht (Addison-Wesley, 4th Ed.)	B
Optics and Photonics, F. Graham-Smith and T.A. King (Wiley)	B

Electricity and Magnetism

Dr M.R.C. Hunt

21 lectures in Michaelmas and Epiphany Terms

Syllabus: Electrostatics: Electric charge, Coulomb's law, permittivity of vacuum, \vec{E} , electric field lines, electric dipoles, continuous charge distributions, Gauss's law, calculation of \vec{E} using Gauss's law, potential energy, electric potential, $\vec{E} = -\nabla V$, equipotentials, capacitors, dielectrics, electric energy density, circulation of \vec{E} , electromotive force. Magnetostatics: Currents in conductors, Ohm's law, circulation of \vec{E} round circuit, electromotive force, \vec{B}

field, force on moving charge/current, Lorentz force, force on a current-carrying coil, magnetic dipole moment, Biot-Savart law, permeability of vacuum, magnetic field patterns due to current loop/bar magnet, Gauss's law for magnetism, magnetic monopoles, circulation of \vec{B} , Ampere's law, calculation of \vec{B} for current line, torus, solenoid. Time Variations: Faraday's law, \vec{E} from $d\vec{B}/dt$, induced emf, back emf, motional emf, inductance, magnetic energy density, displacement current, \vec{B} from $d\vec{E}/dt$, Maxwell's equations.

Textbooks:

Physics for Scientists and Engineers: Extended Version, E
P.A. Tipler and G.P. Mosca (Freeman)

Quantum Mechanics

Prof A.D. Martin

18 lectures in Epiphany and Easter Terms

Syllabus: Brief review of classical physics. Outstanding problems: black body radiation, photo-electric effect, stability of atoms. Discovery of Planck's constant. Quantization of energy. Particle nature of radiation. Compton effect. Rutherford model of the atom. Bohr model of the hydrogen atom; its successes and its limitations. Particle-wave dualism. Double slit experiment; quantum mechanical interpretation. Wave nature of matter. Uncertainty principle; worked examples. Schrödinger's non-relativistic wave equation. Separation of variables. Bound state and potential well problems: square wells of infinite and finite depth. The solution of Schrödinger's equation for the simple harmonic oscillator. Reflection and transmission of particle beams by potential steps and barriers. Quantum tunneling and applications: Theory of alpha radioactivity, scanning tunneling microscope, age of Sun, etc.

Textbooks:

Physics for Scientists and Engineers: Extended Version, E
P.A. Tipler and G.P. Mosca (Freeman)

An Introduction to Quantum Physics, E
A.P. French and E.F. Taylor (Nelson)

Modern Physics, B
R.A. Serway, C.J. Moses and C.A. Moyer
(Saunders)

Quantum Physics of Atoms, Molecules, Solids, Nuclei and B
R.M. Eisberg and R. Resnick (Wiley) *Particles*

Quantum Physics, B
E.H. Wichmann (McGraw-Hill)

Essentials of Modern Quantum Physics, B
T.R. Sandin (Addison-Wesley)

Tutorials

Personal tutors

One 1-hour tutorial per fortnight in Michaelmas, Epiphany and Easter Terms

Each student is assigned to a member of staff who acts

as the student's academic tutor for the year. As part of a group of typically five or six students, you will meet with your tutor regularly from the start of the year and will discuss various topics in physics. Tutors will use the weekly problems as a basis for these discussions and will try to ensure that you gain a secure foundation, particularly in Mathematics. Tutors will also give advice on study skills, the transition from school to university, problem-solving techniques and revision skills. The tutorial provides an excellent forum for you to raise issues of interest or difficulty and should not deteriorate into a monologue by the tutor. **The more preparation and effort you put into the tutorial, the more you will get out of it.**

A notice will be displayed at the start of the Michaelmas Term listing tutors and tutees. The first tutorial will take place early in the term.

Problem exercises

We are concerned that you should learn how to apply the basic principles of physics to the solution of a range of problems. Problem solving is a transferable skill that will be of great benefit to you in a wide variety of circumstances. To help you develop these skills, each week a number of homework problems will be set, related to the course work. As part of the course requirements, you are expected to attempt these problems and to submit solutions in due time. The marks obtained for this assignment contribute to the total mark for the module. This is a **compulsory** part of your degree course and forms one of the components used to fulfil the requirements to 'Keep Term'. If you are unable to submit your work for any reason, you must contact the Physics Department (see 'Deadlines for Submitted Course Work' on page 8). A few problems for private study or discussion during tutorials will also be issued every week.

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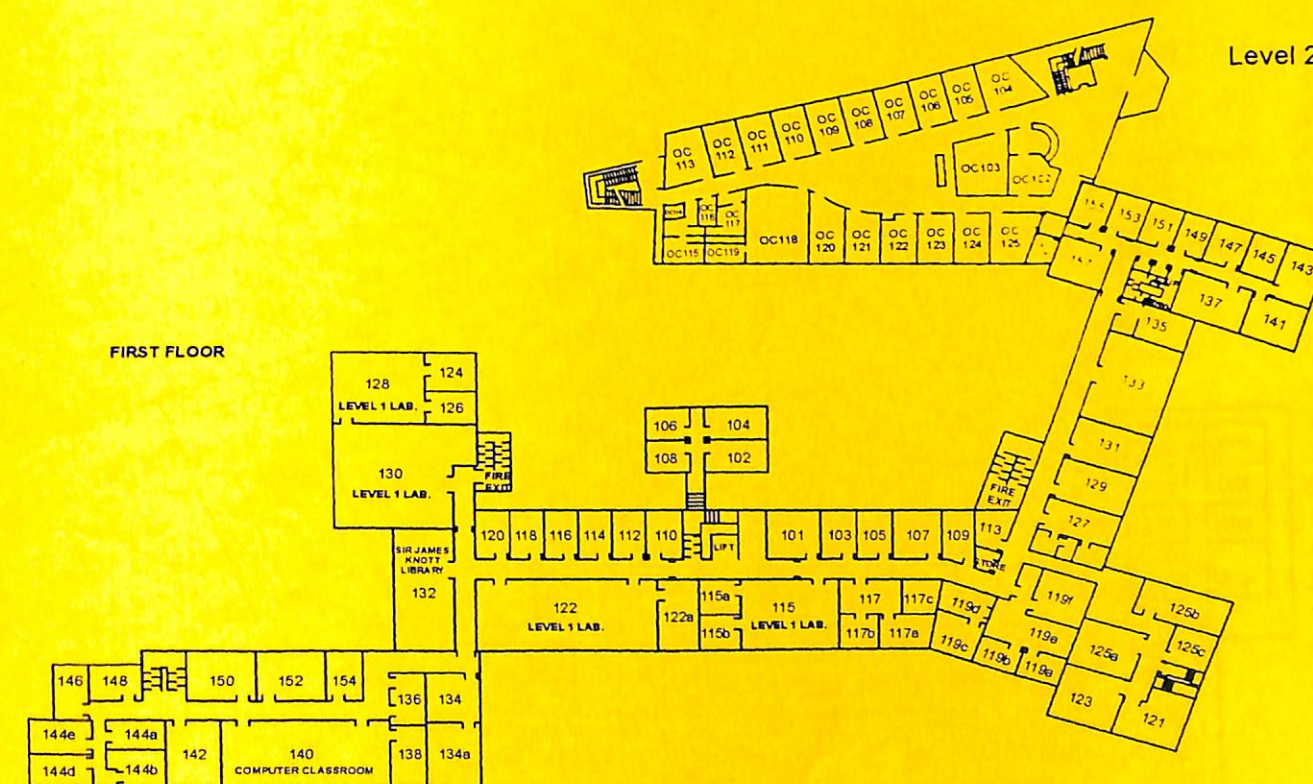
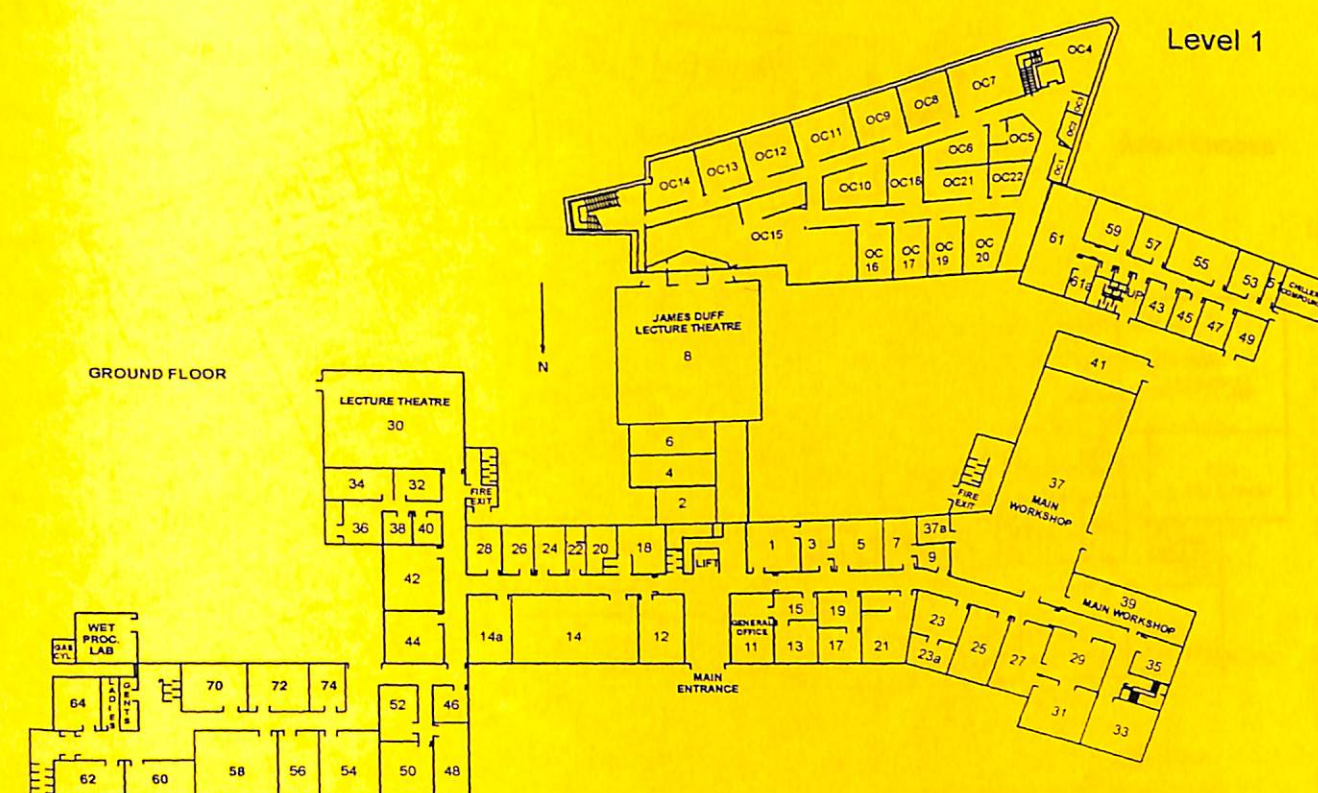
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DEPARTMENT OF PHYSICS FLOOR PLANS



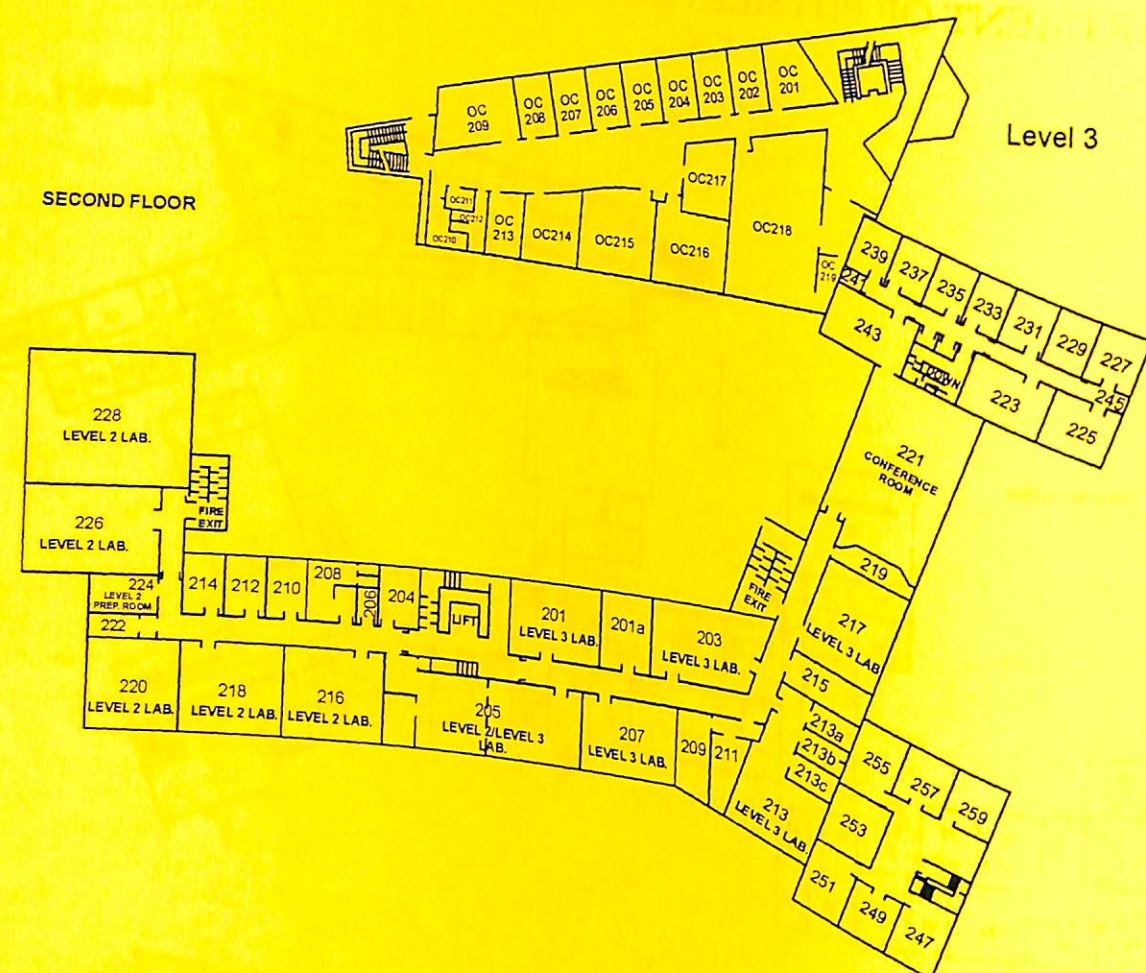
UNIVERSITY OF DURHAM

DEPARTMENT OF PHYSICS

STAFF

Telephone			Position	Email	Room
ADMINISTRATION					
43520			General Enquiries	physics.office@durham.ac.uk	11
43525	Prof	RA Abram	Head of Department	physics.head@durham.ac.uk	5
43626	Mrs	S Little	Departmental Secretary	physics.secretary@durham.ac.uk	3
43544	Dr	CA Woodward	Departmental Administrator	c.a.woodward@durham.ac.uk	1
43583	Miss	PA Carse	Research Administrator	p.a.carse@durham.ac.uk	106
43543	Mrs	CS Davies	Finance Officer	c.s.davies@durham.ac.uk	13
43604	Mr	TC Doloughan	Departmental Superintendent	clive.doloughan@durham.ac.uk	7
TEACHING STAFF					
43618	Prof	CS Adams	Professor	c.s.adams@durham.ac.uk	114
43522	Dr	JR Allington-Smith	Senior Fellow	j.r.allington-smith@durham.ac.uk	251
43636	Dr	P Ball	Reader	patricia.ball@durham.ac.uk	OC205
43526	Prof	RG Bower	Professor	r.g.bower@durham.ac.uk	OC345
43537	Dr	S Brand	Senior Lecturer	stuart.brand@durham.ac.uk	147
43536	Dr	AW Brinkman	Reader	a.w.brinkman@durham.ac.uk	149
43560	Dr	PM Chadwick	Senior Lecturer	p.m.chadwick@durham.ac.uk	322
43666	Prof	JM Chamberlain	Professor	martyn.chamberlain@durham.ac.uk	151
43572	Dr	SJ Clark	Reader	s.j.clark@durham.ac.uk	145
43593	Dr	SM Cole	Reader	shaun.cole@durham.ac.uk	OC343
43598	Dr	RP Cowburn	Reader	r.p.cowburn@durham.ac.uk	148
43577	Dr	GH Cross	Senior Lecturer	g.h.cross@durham.ac.uk	117a
43747	Dr	A Dedes	Lecturer	athanasios.dedes@durham.ac.uk	OC108
43562	Dr	NA Dipper	Senior Research Associate	n.a.dipper@durham.ac.uk	121
43614	Dr	C Done	Reader	chris.done@durham.ac.uk	335
43595	Dr	K Durose	Reader	ken.durose@durham.ac.uk	OC20
43625	Prof	DR Flower	Professor	david.flower@durham.ac.uk	118
43641	Prof	CS Frenk	Professor/ICC Director	c.s.frenk@durham.ac.uk	OC338
43602	Prof	EWN Glover	Professor	e.w.n.glover@durham.ac.uk	OC125
43761	Dr	RAW Gregory	Reader	r.a.w.gregory@durham.ac.uk	OC112
43571	Dr	DP Halliday	Senior Lecturer	d.p.halliday@durham.ac.uk	153
43654	Dr	DP Hampshire	Reader	d.p.hampshire@durham.ac.uk	26
43581	Dr	TPA Hase	Lecturer	t.p.a.hase@durham.ac.uk	68
43600	Prof	PD Hatton	Professor	p.d.hatton@durham.ac.uk	120
43606	Dr	IG Hughes	Lecturer	i.g.hughes@durham.ac.uk	112
43648	Dr	MRC Hunt	Lecturer	m.r.c.hunt@durham.ac.uk	24
43631	Dr	AR Jenkins	Lecturer	a.r.jenkins@durham.ac.uk	OC325
43599	Dr	VV Khoze	Reader	valya.khoze@durham.ac.uk	OC113
43696	Dr	GD Love	Senior Lecturer	g.d.love@durham.ac.uk	249
43610	Dr	JR Lucey	Senior Lecturer	john.lucey@durham.ac.uk	337
43672	Prof	AD Martin	Leverhulme Emeritus Fellow	a.d.martin@durham.ac.uk	OC203
43656	Dr	CJ Maxwell	Senior Lecturer	c.j.maxwell@durham.ac.uk	OC105
43744	Dr	TJL McComb	Researcher	t.j.l.mccomb@durham.ac.uk	314
43566	Dr	N Metcalfe	Computer Officer	nigel.metcalfe@durham.ac.uk	119b

SECOND FLOOR



43616	Prof	AP	Monkman	Professor	a.p.monkman@durham.ac.uk	141
43611	Dr	SL	Morris	Reader	simon.morris@durham.ac.uk	257
43692	Dr	RM	Myers	Senior Fellow	r.m.myers@durham.ac.uk	255
43678	Dr	JL	Osborne	Senior Lecturer	j.l.osborne@durham.ac.uk	320
43686	Dr	L-O	Pålsson	Lecturer	lars-olof.palsson@durham.ac.uk	155
43668	Prof	MR	Pennington	Professor	m.r.pennington@durham.ac.uk	OC201
43698	Dr	RM	Potvliege	Senior Lecturer	r.m.potvliege@durham.ac.uk	116
43617	Dr	SM	Rayner	Senior Tutor	s.m.rayner@durham.ac.uk	312
43764	Dr	P	Richardson	Lecturer	peter.richardson@durham.ac.uk	OC207
43721	Prof	T	Shanks	Professor	tom.shanks@durham.ac.uk	331
43719	Prof	RM	Sharples	Professor	r.m.sharples@durham.ac.uk	247
43564	Dr	A	Signer	Lecturer	adrian.signer@durham.ac.uk	OC202
43713	Prof	FR	Stephenson	Professorial Fellow	f.r.stephenson@durham.ac.uk	212
43749	Prof	WJ	Stirling	Professor/IPPP Director	w.j.stirling@durham.ac.uk	OC104
43677	Prof	BK	Tanner	Professor	b.k.tanner@durham.ac.uk	66
43725	Dr	I	Terry	Lecturer	ian.terry@durham.ac.uk	28
43795	Dr	T	Theuns	PPARC Advanced Fellow	tom.theuns@durham.ac.uk	OC307
43621	Dr	G	Weiglein	Reader	georg.weiglein@durham.ac.uk	OC204

- Notes: 1. The prefix 'OC' denotes the Ogden Centre for Fundamental Physics, which adjoins the Rochester Building.
2. A current telephone and email list for the Physics Department is available online at <http://www.dur.ac.uk/Directory/units/PHY.html>

APPENDIX 3

UNIVERSITY OF DURHAM

DEPARTMENT OF PHYSICS

SAFETY ADVICE AND INFORMATION

The following document contains information on current guidelines affecting the health and safety of all individuals who work, study in or are visiting, the Department of Physics and sets out Department policy on aspects of health and safety at work. It is the responsibility of all members of staff and students working within the Department of Physics to ensure that they are familiar with the safety policies that affect their work area. At all times the minimum requirements for working within the Department of Physics are the standards laid out in the University Safety Manual. In accordance with the Health and Safety at Work Act, and subsequent legislation, it is the duty of every member of the Department and all persons working within the Department to take reasonable care for the health and safety of themselves and of other persons who may be affected by their acts or omissions.

Policy Statement 2004 (extract)

In accordance with Section 2(3) of the Health and Safety at Work Act 1974, the Department aims to provide a safe and healthy working environment for all of its staff and students.

The **Head of Department, Professor R.A. Abram**, has overall responsibility for safety within the Physics Department. The Head of Department can delegate responsibility for the day-to-day management of health and safety to other persons.

The **Departmental Safety Coordinator** is also **Chairman of the Departmental Health and Safety Committee**, and is currently **Dr I. Terry**. The Health and Safety Committee provides specialist advice on Departmental safety policy and its implementation to the Head of Department. Members of the **Departmental Health and Safety Committee** are listed in the foyer of the Rochester Building and on the Department web site. Any staff member or student wishing to raise any safety issue should do so by contacting any member of the Health and Safety Committee or a member of staff with specific responsibilities.

First Aid

The Department has a number of First Aiders, a list of which is displayed in all laboratories, workshops and is attached to all First Aid Boxes. The Physics Department internal telephone directory indicates First Aiders. First Aid Boxes are checked and maintained by Mrs P. Monkhouse (extn 43579). Injuries of a more serious nature should be referred to the Accident Unit of the University Hospital of North Durham.

Departmental Safety Information

Displayed in the Rochester Building ground floor foyer and on the Department web site.

Safety Inspection

Each area of the department undergoes an annual safety inspection.

Accidents and Incidents

The accident and incident reporting book is kept in room Ph7 and reporting forms can be found in each of the teaching laboratories. **All accidents or incidents that could have led to serious injury should be reported.** Accidents and incidents are recorded as per University policy and if necessary investigated by the Department Safety Coordinator's delegate and/or the University Safety Adviser. The **"Accident Reporting Officer"** is **Mr T.C. Doloughan** and in his absence **Mr N.F. Thompson**.

Fire notices and evacuation in case of fire

A Fire Action Notice is displayed in each office and laboratory. In the event of emergency evacuation the **assembly point for all personnel** is the **Physics Main Car Park**. A general fire practice is held at least once each year to check the evacuation procedure.

Out-of-Hours Working

Undergraduates are not allowed in the Department outside of normal working hours unless written authorisation is given by the relevant laboratory supervisors (restrictions exclude attendance at evening lectures and other official events).

Research students should not undertake experimental work outside normal working hours unless authorised by their Supervisor.

"Out of Normal Hours" Book

ANYONE working in the Department before 7.00 a.m. or after 7.00 p.m. Monday to Friday, or any time Saturdays or Sundays, MUST sign the book kept at either the entrance to the Rochester Building or Ogden Centre. Further to this requirement **ANYONE** working in the Department after 10.00 p.m. MUST have the written permission of his/her supervisor. A list of persons with such permission is on display on the Safety Noticeboard. Forms for gaining the appropriate authorisation are obtainable from the Departmental Superintendent (Ph 7).

Apparatus Working Overnight

The Departmental Superintendent (Ph 7) has a supply of forms that must be completed before apparatus (other than computers) is left running overnight. The forms come in pairs, (yellow and white), and when completed the yellow form is left beside the apparatus, and the white form is sent to the Science Site Caretaker's Office.

Personal Protection

Anyone requiring Personal Protective Equipment whilst working in research and teaching labs should contact the laboratory supervisor, who should provide suitable equipment.

Manual Handling

Manual handling of heavy objects is subject to an assessment and agreed procedure in compliance with the general University Policy on Manual Handling.

Workshops

The Department has two workshops which are each equipped with specialist-operated equipment. Qualified technical staff normally use this equipment. Unskilled staff may only use it under supervision. The persons responsible for overseeing that safe working practices are carried out in the workshops are:

Electronics Workshop	Mr J.F. Scott
Mechanical Workshop	Mr P. Armstrong

Second year undergraduate students and first year postgraduates are offered the chance to attend formal workshop courses each year. These courses, organised and operated in the Mechanical Workshop, teach and promote safe working practices within a Mechanical Workshop.

Display Screen Equipment

The installation of all workstations in use in the Department must comply with the Health and Safety (Display Screen Equipment) regulations 1992. It is the **responsibility of the operator** to ensure compliance with these Regulations. All non-portable computers are classified as workstations unless they are connected to apparatus and used for data collection or instrument control. Portable (lap-top) computers are not classified as workstations. An assessment form should be completed for every workstation in the Department; these forms can be completed via the department web site or by obtaining a paper version from the Departmental Safety Supervisor, Mr S. Lishman (Ph 37), who will also assist in assessments if required.

COSHH

The Departmental COSHH Officer, **Dr I. Terry** (Ph 28), keeps all records of COSHH assessment forms. All members of the Department have a responsibility to obtain and complete COSHH Assessment forms when introducing a new chemical into their area. They must also provide the Departmental COSHH officer with a copy of their completed assessment forms. Disposal of waste chemicals should be done by contacting Mr N.F. Thompson, who will make the necessary arrangements.

Ionising Radiation

No activities involving the purchase, use or disposal of sources of ionising radiation may be undertaken without consultation with the Departmental Radiation Safety Officer (Mr W. Dobby, Ph 215). Compliance with University Policy on the use of ionising radiation is mandatory.

Lasers

No activities involving the use of lasers may be undertaken without consultation with the Departmental Laser Safety Adviser (Professor A.P. Monkman, Ph 141). Compliance with the University Policy on Laser Safety is mandatory.

Specialist Areas

In addition to this General Policy Statement there are a number of specialist areas within the Department which have a Code of Safe Working Practice particular to that area.

These areas are:	Physics Building Roof Area
	Physics Building Telescope Domes used by students
	II-VI Semiconductor and Ceramics Group
	X-ray Generators
	Chemistry Laboratory (Ph 223) Working Procedures
	Electronics Workshop
	Laser Laboratories
	Mechanical Workshop

Any person working in any of these special areas **must** make themselves aware of the Codes of Practice for their particular area.

Members of staff with specific responsibilities:

COSHH	Dr I. Terry
Waste Chemical Disposal	Mr N.F. Thompson
Manual Handling	Mr P. Armstrong, Mr S. Lishman and Mr K. McGee
Bottled Gases	Mr N.F. Thompson
Cryogenics	Mr J. Dobson
Ionizing Radiation Officer and Radiation	
Badge Monitor	Mr W. Dobby
Lasers and UV Radiation	Professor A.P. Monkman
Laser Monitor	Mr I. Manfren
Display Screen Assessor	Mr S. Lishman
Portable Appliance Testing	Mr J. Scott
Accident Reporting Officers	Mr T.C. Doloughan and Mr N.F. Thompson
Local Exhaust Ventilation (LEV)	Mr D. Pattinson
Department Vehicle	Mr P. Armstrong

GENERAL PRECAUTIONS

Be tidy – adopt good housekeeping
Do not work alone if risks are obvious
Report any hazards you may spot
Report all accidents
Be aware of security
Keep emergency exits and passageways clear
Dispose of chemicals, aerosols, glass, sharps etc. in a responsible manner
Observe the rules for 'out of normal hours working' – see Health and Safety Policy Statement
Do not use the lift outside of normal working hours unless it is absolutely necessary
Walk, don't run – most accidents are associated with slipping on the floors and staircases
Do not bring bicycles into the building
Eating and drinking is not permitted in the laboratories
The University is regarded as a 'no smoking zone'
Place notices to warn others of hazards
Seek advice if unsure of risks involved

DEALING WITH EMERGENCIES

**FIRST DIAL 9-999 AND GIVE CLEAR DETAILS OF EMERGENCY,
THEN DIAL 43333 TO ADVISE THE UNIVERSITY SECURITY STAFF WHO WILL THEN LIAISE
WITH THE EMERGENCY SERVICES.**

FIRE ALARMS

These are situated throughout the building in corridors, rooms etc. Break the glass, operate the alarm which sounds the fire bells in the building and automatically sends a fire alarm indication to the Fire Brigade control room. The main panel indicators, which indicate the area of the fire, are situated on the ground floor near the General Office and in the entrance foyer of the Ogden Centre.

FIRE EXTINGUISHERS

These are situated in corridors, laboratories, workshops, lecture theatres etc. The different types are:

WATER DISCHARGE (MOST)
CARBON DIOXIDE
DRY POWDER

Paper, wood, etc.
Live electrical circuits.
Metal

FIRE DOORS

The fire doors should be kept closed at all times to prevent the spread of fire. Kick out wedges.

EMERGENCY EXITS

In addition to making an exit through the main entrance/exit doors you should ensure that you know where the emergency exits are located. They are all sign posted – check the position of your nearest emergency exit to your workplace. The EMERGENCY EXITS must not be used for any purpose other than an EMERGENCY.

ESCAPE HATCHES IN LABORATORIES

Keep these areas clear at all times.

FIRE NOTICES

Every room in the building should have a notice displayed informing the occupants of the action to take in the event of a fire. Please inform the Departmental Superintendent if a notice is not displayed.

